Friday.

C J 461 Dec. 21. 1880

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

No. ~~437.~~ 165

WILLIAM WICKE, APPELLANT,

vs.

HENRY P. OSTRUM.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

FILED JULY 1, 1878.

SUPREME COURT OF THE UNITED STATES.

No. 437.

WILLIAM WICKE, APPELLANT,

vs.

HENRY P. OSTRUM.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

INDEX.

	Original.	Print.
Subpœna	1	1
Bill	3	1
Appearance	18	6
Answer	19	6
Amendment to answer	29	9
Replication	31	10
Amended answer	33	10
TESTIMONY ON FINAL HEARING.		
Complainant's Exhibit No. 1	37	11
Testimony of William Wicke	40	14
Complainant's Exhibit No. 2	40	14
No. 3	41	15
Testimony of Taber Du Four	43	17
Complainant's Exhibit No. 8	51	25
No. 9	52	25
Testimony of Thomas R. Almond	53	26
Examiner's certificate	72	43
DEFENDANT'S PROOFS.		
Notice of taking testimony on part of defendant	74	44
Testimony of George R. Kelsey	76	45
Wm. W. Hyde	77	45
Notice of taking testimony before J. M. Deuel	79	46
Testimony of William E. Uptegrove	80	46
A. W. Gedney	81	47
Henry P. Ostrum	83	48
George Terry	85	49

	Original.	Print.
Testimony of Wm. C. Hicks	116	65
Defendant's Exhibit A	138	76
C	139	77
D	145	80
E	151	82
Opinion of Judge Blatchford	164	88
Final decree	165	88
Petition of appeal to United States Supreme Court	167	89
Bond on appeal to United States Supreme Court	172	90
Citation on appeal to United States Supreme Court	174	91
Clerk's certificate	179	91

1 The President of the United States of America to Henry P. Ostrum, greeting:

You are hereby commanded that you personally appear before the judges of the circuit court of the United States of America for the southern district of New York, in the second circuit court, in equity, on the first Monday of April, A. D. 1876, wherever the said court shall then be, to answer a bill of complaint exhibited against you in the said court by William Wicke, and to do further and receive what the said court shall have considered in that behalf. And this you are not to omit under the penalty on you of two hundred and fifty dollars.

Witness honorable Morrison R. Waite, Chief Justice of the Supreme Court of the United States, at the city of New York, on the first day of March, in the year one thousand eight hundred and seventy six, and of the Independence of the United States of America the hundredth.

JOHN I. DAVENPORT, *Clerk.*

A. V. BRIESEN,
Compl't's Sol'r.

The defendant is required to enter appearance in the above cause in the clerk's office of this court on or before the first Monday of April, 1876, or the bill will be taken pro confesso against him.

J. I. D., *Clerk.*

2 STATE OF NEW YORK.
County of New York, ss:

Frank V. Briesen, being duly sworn, deposes and says that he personally served the within writ on the within-named Henry P. Ostrum by showing the original to and leaving a copy with a gentleman who represented himself to be the defendant, Henry P. Ostrum, at the office of Uptegrove & Gedney, Nos. 465 & 475 East 10 street, New York, N. Y., at about 2.35 o'c'k of the 9th day of March, A. D. 1876.

F. V. BRIESEN.

Subscribed and sworn to before me this 10 day of March, 1876.

JOHN A. SHIELDS,
U. S. Commissioner for S. N. Y.

I hereby depute Frank V. Briesen to serve the within writ.

OLIVER FISKE,
U. S. Marshal.

N. Y., March 1, 1876.

I certify that the within writ was served as appears by the affidavit of Frank V. Briesen endorsed herein.

OLIVER FISKE,
U. S. Marshal.

New York, M'ch 15, '76.

Filed M'ch 14, 1876.

3 Circuit court of the United States, southern district of New York, second circuit. In equity.

To the judges of the circuit court of the United States for the southern district of New York:

William Wicke, of New York City, in the county of New York and State of New York, and a citizen of the State of New York, brings this

	Original.	Print.
Testimony of Wm. C. Hicks	116	65
Defendant's Exhibit A	138	76
C	139	77
D	145	80
E	151	82
Opinion of Judge Blatchford	164	88
Final decree	165	88
Petition of appeal to United States Supreme Court	167	89
Bond on appeal to United States Supreme Court	172	90
Citation on appeal to United States Supreme Court	174	91
Clerk's certificate	179	91

1 The President of the United States of America to Henry P. Ostrum, greeting:

You are hereby commanded that you personally appear before the judges of the circuit court of the United States of America for the southern district of New York, in the second circuit court, in equity, on the first Monday of April, A. D. 1876, wherever the said court shall then be, to answer a bill of complaint exhibited against you in the said court by William Wicke, and to do further and receive what the said court shall have considered in that behalf. And this you are not to omit under the penalty on you of two hundred and fifty dollars.

Witness honorable Morrison R. Waite, Chief Justice of the Supreme Court of the United States, at the city of New York, on the first day of March, in the year one thousand eight hundred and seventy six, and of the Independence of the United States of America the hundredth.

JOHN I. DAVENPORT, *Clerk.*

A. V. BRIESEN,
Compl't's Sol'r.

The defendant is required to enter appearance in the above cause in the clerk's office of this court on or before the first Monday of April, 1876, or the bill will be taken pro confesso against him.

J. I. D., *Clerk.*

2 STATE OF NEW YORK,
County of New York, ss:

Frank V. Briesen, being duly sworn, deposes and says that he personally served the within writ on the within-named Henry P. Ostrum by showing the original to and leaving a copy with a gentleman who represented himself to be the defendant, Henry P. Ostrum, at the office of Uptegrove & Gedney, Nos. 465 & 475 East 10 street, New York, N. Y., at about 2.35 o'c'k of the 9th day of March, A. D. 1876.

F. V. BRIESEN.

Subscribed and sworn to before me this 10 day of March, 1876.

JOHN A. SHIELDS,
U. S. Commissioner for S. N. Y.

I hereby depute Frank V. Briesen to serve the within writ.

OLIVER FISKE,
U. S. Marshal.

N. Y., March 1, 1876.

I certify that the within writ was served as appears by the affidavit of Frank V. Briesen endorsed herein.

OLIVER FISKE,
U. S. Marshal.

New York, M'ch 15, '76.

Filed M'ch 14, 1876.

3 Circuit court of the United States, southern district of New York, second circuit. In equity.

To the judges of the circuit court of the United States for the southern district of New York:

William Wicke, of New York City, in the county of New York and State of New York, and a citizen of the State of New York, brings this

his bill of complaint against Henry P. Ostrum, of New Haven, in the State of Connecticut, and a citizen of the United States, and thereupon your orator complains and says that one George Wicke, now deceased, being formerly a citizen of the United States, was before the 16th day of June, 1863, the true and original inventor or discoverer of a
4 new and useful improvement in machines for nailing cigar boxes, which said invention or improvement was not known or used by others before the invention and discovery thereof by the said George Wicke.

That the said George Wicke thereupon afterwards did apply to the Commissioner of Patents for letters patent of the United States for such improvement, and having fully and in all respects complied with all the requirements of the law in that behalf, and especially having made oath that he verily believed himself to be the true inventor or discoverer of the said improvement, and also having paid into the Treasury of the United States the sum of thirty five dollars, and presented to the
5 Commissioner of Patents a petition setting forth his desire to obtain an inclusive property in said improvement, and praying that letters patent might for that purpose be granted unto him, and having also delivered and filed in said office of the Commissioner of Patents a written description of his said improvement in such full, clear, and exact terms as to enable any person skilled in the art with which the said improvement is most nearly connected to make and use the same, which said description was duly signed by said George Wicke and attested by two witnesses, and thereupon the said Commissioner of Patents caused letters patent to be made out in the name of the United States of America in due form of law in all respects, bearing date the 16th day of June, A. D. 1863, whereby was granted unto the said George Wicke,
6 his heirs, administrators, or assigns, for the term of seventeen years from the date thereof, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, which is entitled in said letters patent "machine for nailing boxes," and the said letters patent having been signed by W. T. Otto, Acting Secretary of the Interior of the United States, and countersigned and sealed with the seal of the Patent Office by D. P. Holloway, Commissioner of Patents of the United States, and the same having been duly recorded, were issued and delivered unto the said George Wicke, and by virtue thereof the said George Wicke became and
7 was the sole owner of all the right and privileges granted and secured or intented to be secured in and by said letters patent, as by reference to said letters patent or a certified copy thereof here in court ready to be produced, will more fully and at large appear.

And your orator further shows unto your honors that on the 18th day of November, 1872, the said George Wicke, by his deed of that date, duly executed and recorded, for valuable consideration, conveyed to your orator, the said William Wicke, all his right, title, and interest in and to the invention and discovery secured by the said letters patent in and for the State of New York, with the exclusive right and license therein to manufacture, use and vend the machines for nailing boxes so patented during the unexpired term of said patent, as by
8 the said deed here in court to be produced if required will more fully and at large appear.

And your orator further shows unto your honors that the said George Wicke died in or about the month of June, 1875, and by his last will and testament, which was duly signed and executed by said George Wicke, deceased, on the 29th day of November, 1872, he bequeathed

all his property, with the exception of certain sums of money specified in said will, to his widow, Therese Wicke, and that thereby the said Therese Wicke, by said last will and testament, became the sole and exclusive owner of the said letters patent, excepting however the right for the State of New York, which was at that time already vested in your orator as aforesaid.

And your orator further shows unto your honors that by an assignment bearing date the 25th day of October, 1875, and duly
9 recorded on the 26th day of October, 1875, in Liber P 19, page 477, of transfers of patents, the said Therese Wicke, with the consent of the executor of the last will of said George Wicke, deceased, assigned, sold, and conveyed unto your orator, William Wicke, all her right, title, and interest in the above mentioned letters patent and invention to the full end of the term for which said letters patent are granted, as by reference to a duly certified copy of said last will and testament, and to said assignment or a duly certified copy thereof here in court, ready to be produced, will more fully and at large appear.

And your orator further shows unto your honors that by the said two assignments aforesaid your orator became and now is the sole owner of said letters patent for machines for nailing cigar boxes; and that said rights and interests have been and are of great value to your orator, and that your orator is entitled to all the damages occasioned by the infringement of said letters patent, by the manufacture, use, or sale of machines for making cigar boxes, as described and claimed in said letters patent; and that he is by law entitled to sue for and
10 receive the same to his own use.

And your orator further shows unto your honors that he verily believes, and therefore charges the fact to be, that the said George Wicke was the original and first inventor of the improvement for machines for nailing boxes, patented to him as aforesaid, and described and claimed in the said letters patent as aforesaid, and that the same was not known or used by any other person before the invention thereof by the said George Wicke.

And your orator further shows unto your honors that on or about the 7th day of September, 1874, your orator filed his bill of complaint against Henry Kleinknecht and Barbara Kleinknecht in the circuit court of the United States for the second circuit and southern district of New York, setting forth among other things the said letters patent No. 38924, of the 16th day of June, 1863, and the infringement thereof by said defendants Henry and Barbara Kleinknecht, and praying an injunction and account against them. And the said defendants Henry and Barbara Kleinknecht thereupon duly entered their appearance by J. Van Santvoord, esq., and after issue joined testimony
11 was thereupon taken by both parties in due form of law; and your orator further shows unto your honors that the proofs in the said cause being taken, the cause was brought to a final hearing in the month of December, 1874, before his honor Judge Blatchford, and was argued before him by the counsel of the respective parties; that the judgment of said court was announced on or about the 26th day of December, 1874, and that the said court decreed amongst other things that a decree and injunction should be issued against the said defendants Henry and Barbara Kleinknecht, as prayed for in said bill of complaint, and decided that the said letters patent were good and valid in law, and that the said George Wicke was the original and first inventor of the improvements patented in and by the said letters patent.

And your orator further shows unto your honors that since the said

twenty-sixth day of October, 1875, the defendant H. P. Ostrum, well knowing the premises and the rights and privileges secured to your orator, the said William Wicke, by the said letters patent and assignments, but contriving to injure your orator and to deprive him of the profits, benefits, and advantages which might otherwise have
12 accrued to him at the city of New York and elsewhere within the district aforesaid, and at other places in the United States, has unlawfully and wrongfully made, used, and sold, caused others to make, use, and sell, and is now unlawfully and wrongfully making, using, and selling large quantities of machines for nailing cigar boxes, as described and claimed in said letters patent, in violation of the exclusive privilege of your orator to make, use, and sell the same, as aforesaid, and in infringement of said letters patent, but what quantities of machines for nailing cigar boxes, infringing said letters patent, the said defendant has made, used, or sold, or caused to be made, used, and sold, or what quantity of cigar boxes he has made thereon, your orator does not know, and cannot state, but upon information or belief your orator avers that he, said defendant, has made, used, and sold, and has caused others to make, use, and sell large quantities of the same, and is now making, using, and selling large quantities of the same, and that he has derived and received, and is still deriving and receiving, from such sale great gains and profits, but to what amount your orator is ignorant and cannot set forth, but your orator believes the same to be the full sum
13 of ten thousand dollars, and so charges the fact to be, and prays that the defendant may be required to make a disclosure of all such gains and profits.

And your orator further avers that the defendant continues to make, use, and sell such machines for nailing cigar boxes, and refuses, though warned and requested, to desist from such manufacture, use, and sale, or to pay to your orator such gains and profits; by means whereof the defendant has deprived and is still depriving your orator of, and has prevented and is still preventing your orator from receiving the gains and profits from the use of the exclusive right to use the invention and improvement for machines for nailing cigar boxes claimed in said letters patent, which your orator otherwise and but for the said wrongful acts of the said defendant would have obtained and received.

And your orator further shows unto your honors that the aforesaid manufacture, use, and sale of said machines for nailing cigar boxes, infringing the said letters patent by the said defendant, and his preparation and determination to continue the same, and the aforesaid unlawful and wrongful acts, have the effect to encourage and induce other per-
14 sons to infringe and defy the said letters patent and the aforesaid right of your orator under the same.

And your orator prays that said defendant H. P. Ostrum may be required to answer the premises, and may, by a decree of this hon. court, be compelled to account for and pay over to your orator all such gains and profits as have accrued or arisen to, or been earned or received by the defendant, or to which your orator may be entitled by reason of such unlawful manufacture, use, or sale by him, the said defendant, and his agents and attorneys, of all machines for nailing cigar boxes, as described and claimed in said letters patent, and all such gains and profits as your orator would have received but for the said unlawful acts and doings of the said defendant and his confederates.

And may it please your honors, the premises considered, to grant unto your orator the writ of perpetual injunction issuing out of and under the seal of this hon. court, or issued by one of your honors according to

the form of the statute in such case made and provided, perpetually enjoining and restraining the said defendant H. P. Ostrum, his
15 clerks, attorneys, agents, servants, or workmen, from directly or indirectly making, or causing to be made, using, or causing to be used, or vending to others to be used, any machines for nailing cigar boxes, as described and claimed in said letters patent No. 38924.

And may it please your honors to grant unto your orator a provisional or preliminary injunction, issuing out of and under the seal of this hon. court, enjoining and restraining the said defendant H. P. Ostrum, his attorneys, clerks, agents, servants, and workmen, to the same purport, tenor, and effect hereinbefore prayed for in regard to said perpetual injunction.

And that your orator may have such further or other relief in the premises as the nature of the circumstances of this case may require, and to this hon. court may seem meet and agreeable to equity.

And may it please your honors to grant unto your orator a writ of subpœna ad respondendum of the United States of America, issuing out of and under the seal of this hon. court, directed to the said Henry P. Ostrum, defendant herein, commanding him on a certain day therein to be named to be and appear in this hon. court, then and there to answer
16 all and singular the premises, and to stand and perform and abide such further order, direction and decree, as may be made against him.

And your orator as in duty bound will ever pray, &c.

WILLIAM WICKE.

ARTHUR V. BRIESEN,
Solicitor and of Counsel for Complainant.

UNITED STATES OF AMERICA,
County of New York, ss:

Southern district of New York.

William Wicke, being duly sworn, deposes and says, that he is the complainant in the foregoing bill named, and has read the same and knows the contents thereof; that the said bill is true of his own knowledge, except as to those matters which are therein stated to be on his information or belief, and as to those matters he believes it to be true.

And this deponent verily believes the said George Wicke to have been the first and original inventor of the improvement claimed in the
17 letters patent mentioned in the foregoing bill of complaint, and that the same had not been in use or described before the invention or discovery thereof by the said George Wicke.

WILLIAM WICKE.

Subscribed and sworn to before me this first day of March, 1876.
[L. S.] J. M. DEUEL,
U. S. Com. S. D. of N. Y.

(Endorsed:) United States circuit court, S. district of New York, second circuit. William Wicke vs. H. P. Ostrum. In equity. Bill of complaint. Arthur V. Briesen, compl't's sol'c't'r & of counsel, 258 Broadway, New York, N. Y. Filed March 1, 1876.

18 *Notice of appearance.*

United States circuit court.

WILLIAM WICKE
against
HENRY P. OSTRUM.

SIR: Please to take notice that the defendant, Henry P. Ostrum, appears in this action, and that I am retained as solicitor for said Henry P. Ostrum therein.

Dated New York, April 3rd, 1876.

Yours, &c.,

N. A. CALKINS,
Solicitor for Defendant, 136 *Chambers street, New York City.*

To A. V. BRIESEN, Esq.,
Solicitor for Plaintiff.

(Endorsed:) U. S. circuit court. William Wicke, plaintiff, against Henry P. Ostrum, defendant. Notice of appearance. N. A. Calkins, solicitor for defendants, 136 Chambers street, N. Y. City. Filed Ap'l 3, 1876.

19 Circuit court of the United States, southern district of New York, second circuit.

WILLIAM WICKE
v.
HENRY P. OSTRUM. } In equity.

To the judges of the circuit court of the United States for the southern district of New York.

Henry P. Ostrum, of the city of New Haven, in the county of New Haven, and State of Connecticut, by Newton A. Calkins, his counsel and solicitor, having appeared in this action, hereby maketh answer to the bill of complaint filed by William Wicke on the first day of March, 1876, in the office of the clerk of the said circuit court, and says:

1st. That he denies each and every allegation in said bill of complaint contained, except such as are hereinafter specifically admitted or denied.

2. The said defendant, Henry P. Ostrum, admits that the said William Wicke is a resident of the city of New York and a citizen of the United States, as alleged and set forth in his said bill of complaint.

20 3rd. The said defendant, Henry P. Ostrum, admits that one George Wicke, now deceased, and theretofore a citizen of the United States, did in his life time procure certain letters patent from the United States for an invention of a claimed improvement in machines for nailing segar boxes, but said defendant denies that any claim or claims made in, under, or by virtue of said letters patent are of such a nature, kind, or description in any way or particulars whatsoever, either in their composition or in any of their combinations as to resemble the machine now being manufactured, sold, and used by said defendant.

4th. The said defendant, Henry P. Ostrum, admits that he is manufacturing, using, and selling machines for nailing boxes, but denies that he is either making, using, or selling, or causing others to make, use, or sell machines for nailing segar boxes, unlawfully or wrongfully or in violation of any rights of the said William Wicke, as alleged and set

forth in said bill of complaint, and the said defendant further de-
21 nies that he now is manufacturing, using, or selling, or causing others to make, use, or sell, or that he ever has made, used, or sold, or caused others to make, use, or sell any machine or machines for nailing boxes which in any way, shape, or manner, or in any particular infringes the patent mentioned and set forth in said bill of complaint.

And the said defendant, Henry P. Ostrum, for a further and separate answer and defence to the said bill of complaint, shows unto your honors that the said defendant, Henry P. Ostrum, a resident of the city of New Haven, in the county of New Haven and State of Connecticut, and a citizen of the United States, before the twenty-fifth day of January, 1875, was the true and original inventor or discoverer of a new and useful improvement in machines for nailing boxes, which said invention or improvement was not known or used by others before the invention or discovery thereof by the said Henry P. Ostrum. And that the said Henry P. Ostrum did thereafter make application to the Commissioner of Patents for letters patent of the United States for such invention or improvement, and having fully and in all respects complied with all the requirements of the law in that behalf, and having made oath
22 that he believed himself to be the true inventor or discoverer of the said improvement, and also having paid into the Treasury of the United States the sum of thirty-five dollars, and presenting to the Commissioner of Patents a petition setting forth his desire to obtain an exclusive property in said improvement, and praying that letters patent might for that purpose be granted unto him, and having also delivered and filed in said office of the Commissioner of Patents a written description of his said invention or improvement in such full, clear, and exact terms as will enable others skilled in the art to which it appertains to make and use it, which said description was signed by Henry P. Ostrum, and attested by two witnesses.

And thereupon the said Commissioner of Patents caused letters patent to be issued in due form and in the name of the United States of America, bearing date the twenty-fifth day of January, 1876, whereby was granted unto the said Henry P. Ostrum, his heirs or assigns, for the term of seventeen years from the twenty-fifth day of January, 1876, the exclusive right to make, use, and vend the said invention
23 throughout the United States and the Territories thereof. And that the improvement or invention granted unto the said Henry P. Ostrum by said letters patent as set forth aforesaid is named or entitled in said letters patent "Improvement in machines for nailing boxes," and a description of which invention or improvement is contained in the specifications of which a copy is annexed to said letters patent and made a part thereof. And the said letters patent having been signed by B. , Acting Secretary of the Interior of the United States, and countersigned and sealed with the seal of the Patent Office, by R. H. Duell, Commissioner of Patents of the United States, and the same having been duly recorded, were regularly issue dand delivered unto the said Henry P. Ostrum, whereby the said Henry P. Ostrum became and was and now is the sole, rightful, and lawful owner of all the rights and privileges granted and secured, or intended to be secured, by said letters patent, as by reference to said letters patent or a certified copy thereof here in court ready to be produced will more fully and at large appear.

And the defendant further shows unto honors that said in-
24 vention of the defendant as aforesaid of improvements in nailing boxes nor the claim of the defendant made thereunder does not

in any way resemble or infringe upon the claims of the said William Wicke; nor do they or any of them in anywise conflict or infringe upon any of the rights secured to the said William Wicke by virtue of the letters patent and assignments set forth in said bill of complaint is intended to be granted or secured to him or any other person by any claim or claims made or specifications contained therein.

And the defendant further shows unto your honors that the said defendant, Henry P. Ostrum, now is manufacturing, using, vending, and selling a machine for nailing boxes which are so named in his said letters patent aforesaid, but that the machine or machines so manufactured and sold by the said defendant, Henry P. Ostrum, does not in any of its parts nor in any of its combinations contain any pieces or pieces either contained or claimed in the claims and specifications of the letters patent now claimed to be owned by the said William Wicke, as set forth in his said bill of complaint, but that each and every such
25 machine or machines now being manufactured, used, and sold by the said Henry P. Ostrum, or which the said Henry P. Ostrum has ever manufactured, used, or sold, have been simply and solely the invention or discovery of the said Henry P. Ostrum in each and every of its part and combinations as is set forth and claimed in the specifications contained as a part of said letters patent, as is hereinbefore specifically set forth.

And therefore the defendant prays that the prayer of the said William Wicke, as is contained and set forth in said bill of complaint, may be denied unto him in each and every particular as therein specified and asked for; and especially may it be denied unto the said William Wicke in that portion thereof wherein he asks that the defendant may be required to account for and pay over unto the said William Wicke for all gains and profits which the defendant hath made in the manufacture, use, or sale of machines, &c.; and also may it especially be denied unto the said William Wicke in that portion thereof wherein
26 he asks that the writ of perpetual injunction may issue out of and under the seal of this court prohibiting, enjoining, and restraining the said defendant, &c., from making, or causing to be made, using, or causing to be used, or vending to others to be used, any machines for nailing segar boxes, &c.; and also may it especially be denied unto the said William Wicke in that portion thereof wherein he asks that a provisional or preliminary injunction may issue out of and under the seal of this honorable court, enjoining and restraining the said defendant to the same purport, tenor, and effect as asked for in regard to said perpetual injunction.

And that the said defendant, Henry P. Ostrum, the premises considered, may be by a proper decree of this court adjudged to be the true, rightful, and lawful owner of all the improvements or inventions set forth in said letters patent granted unto him and contained in the claims and specifications therein, as hereinbefore set forth.

And that the said defendant, Henry P. Ostrum, may be adjudged and decreed not to be in any manner infringing on the patent or
27 rights of the said William Wicke.

And that the said bill of complaint may be dismissed, and the said William Wicke decreed to have no cause of action.

And that the said defendant may have awarded to him such costs and damages as shall be just and lawful, and that the said William Wicke may be decreed to pay the same over to the said defendant, Henry P. Ostrum.

And for such other or further order, direction, and decree as shall be just and proper, and which your honors may to the ends of justice deem just and proper to be made or granted in the premises; and the said defendant, Henry P. Ostrum, as in duty bound, will ever pray, &c.

HENRY P. OSTRUM.

N. A. CALKINS,
Solicitor and of Counsel for Defendant.

28 UNITED STATES OF AMERICA,
State of New York, County of New York, ss:

Southern district of New York.

Henry P. Ostrum, being duly sworn, deposes and says that he is the defendant in the foregoing answer named, that he has read the same and knows the contents thereof; that the said answer is true of his own knowledge except as to those matters which are therein stated on his information or belief, and as to those matters he believes it to be true.

HENRY P. OSTRUM.

Subscribed and sworn to before me this 28th day of April, 1876.

J. M. DEUEL,
U. S. Com'r S. D. of N. Y.

(Endorsed:) United States circuit court, southern district of New York, second circuit. In equity. William Wicke vs. Henry P. Ostrum. Answer. N. A. Calkins, sol'r & of counsel for defendant, 24 Park Place, New York City. Filed May 1, 1876.

29 Circuit court of the United States, southern district of New York, second circuit. In equity.

WILLIAM WICKE
vs.
HENRY P. OSTRUM.

To the judges of the circuit court of the United States for the southern district of New York.

The defendant, Henry P. Ostrum, having filed his answer to the bill of complaint of the complainant in this cause, and it having been suggested that the last clause of the defendant's answer is not sufficiently definite and certain, therefore, considering the same, the defendant hereby amends his said answer so as to make the last clause thereof read as follows:

"And the defendant further shows unto your honors that the said defendant, Henry P. Ostrum, now is manufacturing, using, vending,
30 and selling a machine for nailing boxes [substantially as specified and claimed in and] which are so named in his said letters patent," and thereafter as now contained in his said answer, the amendment being the insertion of the words [substantially as specified and claimed in and] which are contained between the brackets, and in all other respects the answer to stand as it now reads.

Dated May 13th, 1876.

HENRY P. OSTRUM,
By N. A. CALKINS,
His Solicitor.

I consent to the foregoing amendment of the answer.

A. V. BRIESEN,
Compl't's Sol'c't'r.

(Endorsed:) U. S. circuit court, southern district of New York. In equity. William Wicke vs. Henry P. Ostrum. Amendment of answer. N. A. Calkins, sol'r & of counsel for def't, 24 Park Place, N. Y. City. Filed May 13, 1876.

31 United States circuit court, southern district of New York. In equity.

WILLIAM WICKE
vs.
HENRY P. OSTRUM.

The replication of William Wicke, complainant, to the answer of Henry P. Ostrum, defendant.

The repliant, saving and reserving unto himself now and at all times hereafter all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer, for replication thereunto says, that he will aver, maintain, and prove his said bill of complaint to be true, certain, and sufficient in law to be answered unto, and that the said answer of the said defendant is uncertain, untrue, and insufficient to be replied unto by this repliant.

Without this, that any other matter or thing whatsoever in the
32 said answer contained, material or effectual in the law to be replied unto, and not herein and hereby well and sufficiently replied unto, confessed or avoided, traversed or denied, is true; all which matters and things this repliant is and will be ready to aver, maintain, and prove as this hon. court shall direct, and humbly prays as in and by his said bill he has already prayed.

A. V. BRIESEN,
Compl't's Sol'c't'r & of Counsel.

(Endorsed:) U. S. circuit court, south. dist. of N. Y. In equity. Wm. Wicke vs. H. P. Ostrum. Replication. A. V. Briesen, compl'ts sol'c't'r & of counsel, 258 Broadway, New York. Filed May 13, 1876.

33 Circuit court of the United States, southern district of New York, second circuit. In equity.

WILLIAM WICKE, COMPLAINANT,
vs.
HENRY P. OSTRUM, DEFENDANT.

To the judges of the circuit court of the United States for the southern district of New York.

The defendant herein, Henry P. Ostrum, by his solicitor and counsel N. A. Calkins, for an amended separate and supplemental answer to the bill of complaint herein, shows unto your honors, that under the statute in such case made and provided the defendant specially pleads and sets up by way of special answer the following special matters:

That George Wicke, to whom was issued and granted the letters patent mentioned and described in the bill of complaint herein, was not

the first and original inventor or discoverer of any material or
34 substantial part of the matter of invention mentioned, described, and claimed in said letters patent aforesaid, and especially as to the matters set forth and claimed in the fourth claim of said letters patent.

And the defendant hereby gives notice that at the trial he will prove, in addition to the foregoing matter, the following special matters:

That the matter of invention set forth in said letters patent, and specially referred to in the fourth claim thereof, had been patented before the application of the said George Wicke for said letters patent; that the same was patented in and by letters patent number 7768, issued and granted in due form to Charles Atwood and George Kellogg, bearing date November 12th, 1850, as by reference to said letters patent or a certified copy thereof here in court ready to be produced will more fully and at large appear.

And that said matter of invention had been in public use in
35 this country for more than two years before the application of the said George Wicke for said letters patent.

And that the following named persons had prior knowledge of the same as used by the persons and at the places following:

George Terry, residing at New Haven, Connecticut, had knowledge of the use of the same by Sargent and Company, at Leicester, in the State of Massachusetts, more than two years before the application of the said George Wicke for said letters patent.

William W. Hyde, residing at New Haven, Connecticut, had knowledge of the use of the same by the Russell Manufacturing Company, at Middletown, in the State of Connecticut, more than two years before the application of the said George Wicke for said letters patent.

George R. Kelsey, residing at West Haven, in the town of Orange, New Haven County and State of Connecticut, had knowledge of the use of the same by the West Haven Buckle Company in the said
36 town of Orange, county of New Haven, and State of Connecticut, for more than two years before the application of the said George Wicke for said letters patent.

N. A. CALKINS,
Solicitor and of Counsel for Defendant.

(Endorsed:) U. S. circuit court, southern district of N. Y., 2nd circuit. In equity. William Wicke vs. Henry P. Ostrum. Amended answer, &c. N. A. Calkins, sol'r & of counsel for def't, 24 Park Place, N. Y. City. Filed Sep. 15th, 1876.

37 United States circuit court, southern district of New York, second circuit. In equity.

WM. WICKE
vs.
H. P. OSTRUM.

Testimony taken on the part of the complainant under and pursuant to the 67th rule of the Supreme Court of the United States, as amended, before John A. Shields, esq., a standing examiner of said court.

WEDNESDAY, *May 17th*, 1876.—11 o'clock a. m.

A. V. Briesen, esq., appears of counsel for complainant; N. A. Calkins, esq., appears of counsel for defendant.

Counsel for complainant offers in evidence a certified copy of United States letters patent No. 38924, dated June 16th, 1863, and issued to G. Wicke, for machine for nailing boxes, and the same is marked Complainant's Exhibit No. 1, J. A. S., examiner, dated May 17th, 1876.

Complainant's Exhibit No. 1.—*J. A. S., Examiner, May* 17, 1876.

The United States of America to all to whom these letters patent shall come:

Whereas George Wicke, of New York, New York, has alleged that he has invented a new and useful machine for nailing boxes, which he states has not been known or used before his application; has made oath that he is a citizen of the United States, that he does verily believe that he is the original and first inventor or discoverer of the said invention, and that the same hath not to the best of his knowledge and belief been previously known or used; has paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said invention, and praying that a patent may be granted for that purpose.

38 These are therefore to grant according to law to the said George Wicke, his heirs, administrators, or assigns, for the term of seventeen years from the sixteenth day of June, one thousand eight hundred and sixty-three, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said invention, a description whereof is given in the words of the said George Wicke in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand at the city of Washington this sixteenth day of June, in the year of our Lord one thousand eight hundred and sixty-three, and of the Independence of the United States of America the eighty-seventh.

W. T. OTTO,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
[L. S.] D. P. HOLLOWAY,
Commissioner of Patents.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, George Wicke, of the city, county, and State of New York, have invented a new and improved machine for nailing boxes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of the specification, in which—

Fig. 1 represents a sectional side elevation of my invention.

Fig. 2 is a front elevation of the same.

Similar letters of reference in both views indicate corresponding parts.

The object of this invention is to drive the nails which hold together the several boards constituting a box for cigars or for other articles. The nails are generally driven by a hammer, each nail for itself, which obviously

is a very tedious operation. This invention consists in the employment of grooved spring jaws for the purpose of holding the nails and to guide them to the proper place, and it consists further in combining with said spring jaws a corresponding number of rising and falling plungers for the purpose of driving each nail singly and all at the same time; and also in arranging said plungers with globe or disk shaped collars in such a manner that they spread the grooved spring jaws at the proper moment and allow the heads of the nails to pass; also in arranging the cam that serves to depress the plungers with a circular portion in such a manner that the plungers cannot be depressed any further than necessary to drive the nails; finally in the general arrangement and combination of all the parts so that the plungers and jaws as well as the table which supports the boards can be adjusted according to the different sizes of boxes to be made.

To enable others skilled in the art to make and use my invention, I will proceed to describe it.

A represents a frame of cast iron or of any other suitable material. Secured to the upper part of this frame by means of angular guide pieces, *a*, is the rising and falling gate B, which is operated by means of a cam, C, on the end of a shaft, D, which connects by an arm *b* and rod *c* with a treadle, *d*.

39 The cam C, on being turned in the direction of the arrow marked on it in figure 2, depresses the gate B, until the circular portion *e f* bears upon the gate. This portion of the cam is made to form part of a circle described from the centre of shaft D, so that the cam may be turned more or less without depressing the gate B any further than desirable.

The gate B acts on one or more plungers, E, each of which moves up and down in a carriage, F, and a spring, *g*, has the tendency to raise the plunger after the same has been depressed or to keep it up when not exposed to the action of any power. The carriage F slides in a lateral direction on ways G, and it is adjusted at the proper point where the nail is to be driven by set screws *h*. A series of plungers to correspond to the number of nails to be driven simultaneously may be so arranged that, by depressing the treadle, all the plungers are depressed and consequently all the nails inserted at the same time.

The lower end of the plunger E is turned down, as clearly shown in the drawing, leaving them just large enough to cover the heads of the nails to be driven, and a disk shaped collar, *i*, is formed at a short distance above the lower ends.

When depressed, the plunger enters the spring jaws H, which are secured to the sides of the carriage F. These jaws are provided with grooves, *j*, to receive the nails (see Figure 1), and they are so formed that when the plunger descends, the disk shaped collar *i* spreads the same, allowing the head of the nail to pass freely through the grooves *j*.

The nails are fed through an inclined tubular channel, I, one after the other, and if several plungers are used, the whole series are depressed by one motion of the cam C.

A table, J, on the lower portion of the frame A, serves to support the boards to be nailed, and this table is adjustable by means of screw spindle K; said boards are adjusted in the correct position by a slide, L, which is adjustable in a groove, *l*. A small recess in the frame A allows the horizontal boards to project very little beyond the edge of the vertical board, so that the rough edges of the boards can be removed by the aid of a plane after the nailing has been accomplished.

The table J, the slide L, and the plunger or plungers can thus be ad-

justed to suit boxes of different size, and the nails are driven simultaneously by one motion of the foot.

What I claim as new, and desire to secure by letters patent, is—

1st. The employment of the grooved spring jaws, H, substantially as described for the purpose of receiving the nails, and to guide them to their proper places.

2nd. The combination with the spring jaws, H, of the rising and falling plunger, E, constructed and operated substantially as and for the purpose described.

3rd. Arranging the plunger, E, with a disk shaped collar, *i*, or its equivalent, to operate in combination with the spring jaws, H, substantially as and for the purpose described.

4th. The arrangement of the circular portion, *e*, *f*, on the cam, C, to operate in combination with the gate, B, and treadle, *d*, substantially as and for the purpose set forth.

5th. The arrangement and combination of one or more adjustable carriages F, table J, and slide L, constructed and operating in the manner and for the purpose substantially as specified.

GEORGE WICKE.

Witnesses:
GEO. W. BEED.
M. S. PARTRIDGE.

Ex'd.—L. P. H.

40 WILLIAM WICKE, a witness called on the part of the complainant, and being duly sworn, deposes and says:

(It is consented by counsel for the defendant that the complainant is vested with the title in the letters patent, Exhibit No. 1, in the manner set forth in the bill of complaint.)

Q. 1. What is your name, age, residence, and occupation?

A. My name is William Wicke, my age is 36 years, I reside in 259 East 7th street, N. Y. City, and I am a manufacturer of cigar boxes.

Q. 2. Are you the complainant in this suit?

A. Yes, sir.

Q. 3. Have you seen one of the machines manufactured and sold by the defendant, and against which the complaint is made; and, if so, when did you see such machine, and where, and how came you to see it?

A. I have seen one of those machines about the 12th of February, '76, at Uptegrove & Gedney's, lumber dealers, 465 to 475 East 10th street, N. Y. I received this letter in which they invited me to come and examine the machine.

(Letter and envelope produced by witness, is offered in evidence by counsel for complainant, and the same is marked Complainant's Exhibit No. 2, J. A. S., examiner, May 17th, 1876.)

Complainant's Exhibit No. 2.—May 17th, 1876, J. A. S., Ex'r.

[Uptegrove & Gedney, successors to Rodman & Hepburn, dealers in Spanish cedar, office 465 & 467 East 10th street.]

NEW YORK, *February* 10, 1876.

Mess. WM. WICKE & CO.,
155 *Goerck St.:*

GENTLEMEN: We have the sale of a new patent segar-box nailing machine, and would be glad to have you call and examine its workings. It nails all parts of the box.

Yours, truly,

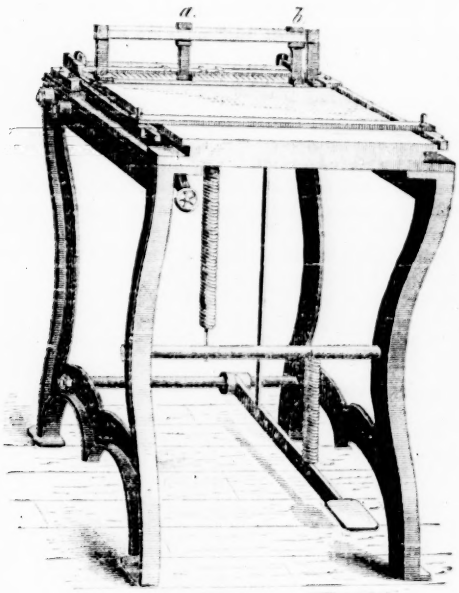
UPTEGROVE & GEDNEY.

(Complainant also offers in evidence the printed circular of Uptegrove & Gedney, sole agents, and the same is marked Complainants's Exhibit No. 3, J. A. S., examiner, May 17th, 1876, and counsel for defendant admits that the same is a circular advertising the defendant's machine here in controversy, and issued in support of the sale of such machine.)

Q. 4. Look at the circular marked Exhibit 3, and state whether the same, as far as you can remember, illustrates the machine which you saw at the time and place mentioned in your last answer.

A. It illustrates the machine which I saw.

41 *Compl't's Ex. 3, J. A. S., Ex'm., May 17, 1876.*



OSTRUM NEW CIGAR BOX NAILING MACHINE.—Patented January 26, 1876.

Office of Uptegrove & Gedney, dealers in Spanish cedar, 465 to 475 East Tenth street.

NEW YORK, *March* 18, 1876.

DEAR SIR: In extending our sphere of operations in the line of Spanish cedar and cigar box manufacturers' supplies generally, we have now the pleasure of bringing to your notice Ostrum's new patent cigar box nailing machine.

We believe this machine to be of unusual interest to cigar-box makers, as it supplies a need long felt; and as this is the first nailing machine ever offered for sale in this country which completely meets the requirements of box makers, we take a special pleasure in introducing it, feeling assured that it will at once claim the favorable attention of every manufacturer. The above cut gives a fair illustration of the machine. One of its chief merits is its simplicity of construction and movement,

and, being entirely free from complicated or delicate machinery, it is almost impossible for it to get out of order. These machines require no skilled labor, being easily operated by mere boys; and as to capacity, we would simply state that they have nailed at the rate of more than two thousand frames per day.

The waste of nails which always attends hand nailing is entirely obviated by the use of this machine, and the accuracy and finish of its work is perfection itself. It is intended for every style and size of box, including the drop lid box, nailing all the parts—frames, tops and bottoms; thus entirely dispensing with hand nailing. In addition to the uniformity and neatness of its work, the ends of the box require little, if any, smoothing, thereby saving much labor in this respect.

Its movement will be easily understood, we think, from the cut. The first pressure upon the treadle moves forward the sliding cross bar upon the table and thus holds the parts to be nailed firmly against the dies which hold the nails, continuing the pressure upon the treadle brings forward the cross head fitted into the dies and drives the nails to their places, the whole operation being performed by a single rapid movement of the foot. Any number of nails required, from one to twenty, or even more, may be driven with each movement.

The entire machine occupies a space of 24 by 30 inches, is 3½ feet high, weighs about 300 lbs., and is built entirely of iron and steel in the best workmanlike manner.

Price, with shop right, $165 net cash.

It is shipped in complete order for transportation, without extra charge for packing.

Address

UPTEGROVE & GEDNEY,
Sole Agents,
Dealers in Spanish Cedar and Cigar Box Makers' Supplies,
465 to 475 East Tenth St., New York City.

42 Q. 5. Was that machine marked patented, or otherwise represented to you as the defendant's machine?

A. I was told it was Mr. Ostrum's, of New Haven, patent.

(It is consented that the machine was the defendant's machine.)

Q. 6. Look at the parts which I marked *a* and *b* on Exhibit No. 3, and state whether the defendant's machine had these parts, and also describe these parts, and their function, if you can.

A. The machine had these parts; they are gages, and are used to place the edges even, while nailing the pieces together; they are sliding gages, sliding on the bar across the machine.

Q. 7. State whether or not these gages *a* and *b* perform the same service on defendant's machine as the slide L is described to perform in the complainant's patent.

(Objected to the form of the question, and that it is immaterial and incompetent, that the complainant should show what service his machine performs.)

A. Yes, sir.

(Complainant also offers in evidence a certified copy of model in the matter of defendant's patent of January 25th, 1876, No. 172579, marked Complainant's Exhibit 4, J. A. S., Examiner, May 17th, 1876.)

Q. 8. Do I understand you to say that the gages which you saw in defendant's machine were placed on the bar which extends across the top of the machine, being the highest bar of Exhibit No. 4?

A. Yes, sir.

Q. 9. On which direction were these gages adjustable on the bar?
A. Along the length of the bar horizontally.

Cross examined:

X Q. 10. Have you ever seen this machine of defendant's in actual operation?
A. Yes, sir.
X Q. 11. Do I understand you to say that the use of the gages is to hold any portion of the box in position while nailing?
(Objected to, as the witness has not said "to hold," but to "place" them there.)
A. The gages place the pieces, and hold them while they are being nailed; by holding, I mean they prevent the pieces from sliding sideways.
X Q. 12. Do you mean to state that the use of the gages are essential after the pieces are placed in position, and while the nails are being driven?
(Objected to as incompetent, the question at issue being as to whether the defendant uses the pieces, not the object thereof.)
A. They are.
X Q. 13. Are these pieces or gages constructed and arranged on the defendant's machine the same as in the complainant's machine?
43 A. They are not exactly constructed as in my machine.
X Q. 14. Are the combinations of the gages and pieces on defendant's machine the same as the combinations upon complainant's machine?
(Objected to as not cross-examination, and as indefinite, and as calling for an opinion, and defendant is warned that by this question he makes the witness his own.)
A. I am not an expert, and therefore not able to answer the question.

Redirect:

R. D. Q. 15. Please tell me, Mr. Wicke, what you mean by stating that these gages are essential on defendant's machine; could the machine not be sold and used without these gages?
A. I do not think it could be used without them. It is impossible to bring the pieces even, which are nailed together.

WILLIAM WICKE.

Sworn to before me this 17th of May, 1876.

JOHN A. SHIELDS,
Examiner, &c.

Adjourned to Wednesday, May 31st, 1876, at 11 o'clock a. m.

WEDNESDAY, *May 31st*, 1876—11 o'clock a. m.

Pursuant to adjournment. Counsel present as before.
Adjourned to Tuesday, June 6th, 1876, at 11 o'clock a. m.

TUESDAY, *June 6th*, 1876.

Met pursuant to adjournment.
Present, counsel as before.

A. FABER DU FAUR, a witness called on behalf of complainant, being duly sworn, deposes and says as follows:

Q. 1. What is your age, residence, and occupation?
A. Age, 50 years; I reside at Newark, New Jersey; engineer and expert in patent causes.

Q. 2. How long have you been expert in patent causes, and in what courts has your testimony as such expert been used?

A. I have during the last eight years been examined as expert witness in a considerable number of patent causes before the U. S. courts.

Q. 3. Have you read the U. S. Letter Patent No. 38924, dated June 16th, 1863, and granted to George Wicke, for a machine for nailing boxes; and, if so, do you understand the invention described and claimed in said patent?

A. I have examined a copy of the letters patent referred to, and I believe I understand the invention described and claimed therein.

Q. 4. State whether or not you have also examined, and seen in operation, a machine for nailing boxes, constructed in accordance with such letters patent, and if you understand the operation of the same?

44 A. I have examined such patented machines at the factory, No. 155 Goerck Street, New York, Wicke & Co., and seen the machines in operation there. I think I understand the mode of action.

Q. 5. What is the invention described in said Letters Patent, and claimed therein?

(Objected to as incompetent, and that the witness has not been properly shown to be an expert.)

A. The object of the invention is, as stated in the specification, "to drive the nails which hold together the several boards constituting a box for cigars, or for other articles." The state of the art at the time of the invention is referred to in the following words: "The nails are generally driven by a hammer, each nail for itself, which obviously is a very tedious operation." The inventor shows and describes a machine where the use of the hammer is dispensed with, and where a series of nails may be driven at the same time, instead of driving each nail for itself by a hammer, as was done prior to the invention. The machine, as shown and described, consists of the following principal parts:

First. Grooved guides for the nails. They are in the specification, and in the claims, called "grooved spring jaws," or "spring jaws," and they are, as stated, "for the purpose of holding the nails, and to guide them to the proper place."

Second. One or more reciprocating plungers, or press platens; they are so arranged that a number of nails may be driven simultaneously.

Third. A table, or abutment, against which the articles to be nailed are placed, and which receive the thrust of the plungers, and

Fourth. A slide to adjust the articles to be nailed in the proper position.

In addition to those principal parts of the organization of the machine the inventor describes and shows means for imparting the reciprocating motion to the plungers; also an arrangement for adjusting the plungers in different positions, or at different distances from each other; also the method for adjusting the position of the table or abutment.

The operation of the machine is as follows: The table, or abutment, is adjusted at the proper distance for the articles to be nailed, so that when the plungers are nearest to the abutment, the nails will be driven as desired. The plungers are adjusted at the desired distance, and one nail is then fed into each of the guides through a tube. By depressing the treadle, a cam pushes the plungers simultaneously in the direction towards the abutment, pushing the nails in the same direction, and as the abutment cannot yield, the nails are driven into the boards placed between the abutment and the plungers.

In the first claim I find recited "grooved spring jaws," which, as I have already stated, are "grooved guides," for holding and guiding the

nails. As I understand it, these "grooved guides" must form part of a nailing machine.

In the second claim I find recited the following elements: First. "Spring jaws," which, as stated, are "grooved guides." Second. Rising and falling plungers, that is to say, reciprocating press platens, which drive the nails past the grooved guides into the articles to be nailed.

In the third claim I find recited a specific arrangement of the plungers.

The fourth claim refers to the specific method shown for imparting reciprocating motion to the plungers.

The fifth claim recites the following elements: First. One or more adjustable carriages, F. As shown and described, the carriages F contain the plungers, and are made adjustable, so as to regulate the distance of the different nails. Second. A table, or abutment, J, which forms the support against which the boards to be nailed are placed, and which receives the thrust of the plungers. Third. A slide, L, for adjusting the boards in the correct position.

Q. 6. You state that the grooved guides, or jaws, are described to be for the purpose of "holding the nails, and to guide them." With reference to the position and motion of the plunger, please state when the guide is to hold the nail, and when it is to guide it.

A. The nail when first put in is guided to the proper place by the position of the grooved guides. It is then held in this position, and then guided until the plunger is far enough advanced, so that the nail requires neither further guide nor holding device. The nail is held in position until the plunger strikes it, then until the point of the nail passes into the wood the nail is both held and guided.

Q. 7. You say that the jaw is grooved. In what direction do you find it grooved, with reference to the position and motion of the plunger?

A. The groove extends in the direction of the plunger, and the plunger has its motion through the groove.

Q. 8. Do or do I not understand you to mean that in the operation the nail is expelled from the groove by the plunger, and that the plunger takes the place of the nail in the groove?

(Objected to as leading.)

A. That is the operation of the plunger.

Q. 9. In what direction do you find the plungers to move?

A. The plungers move in the direction towards the abutment, which, in the position of the machine shown, is a vertical direction.

Q. 10. What do you find to be the object of the spring in the jaw, and what bearing has such spring to the position of the machine? State also what would be the object of that spring in the jaw if the machine were otherwise than vertical.

(The last portion of question objected to, as calling for a conclusion, and otherwise incompetent.)

A. When the machine is in a vertical position, the nail must be held on all sides, so as to prevent its tipping over, and the parts holding it must be so arranged that the nail cannot fall through vertically, and some arrangement must be made to allow the head to pass through when the nail is driven. This is done by opening the jaws. If the machine were placed in a horizontal position, the nail would be held in the jaw by gravity, without requiring jaws enclosing the whole of the nail. The parts of the jaws, as shown and described in the patent, are held together by springs, which admit of their being opened and closed again as soon as released. If the machine were otherwise than vertical, that is to say, if it were horizontal, there would be no object in the spring.

Recess until 2 p. m.

2 P. M.

Met pursuant to adjournment.

Q. 11. The model Exh. No. 4 illustrates a machine for nailing boxes, used by the defendant herein, with the difference that adjustable
46 slides, *a*, *b*, as illustrated on Exh. No. 3, are also used on such machine. With this explanation you are asked to inspect said model, and to state whether or not you find the same or substantial parts thereof to be described in the description and claims of complainant's patent, Exhibit No. 1, and to give your reasons for any opinion which you may express.

(Objected to, as it is not shown that defendant ever made or used such a machine as illustrated by Exh. No. 4, and also that the witness is not shown competent as an expert.

Counsel for complainant protests that the objection foregoing, in view of the allegations contained in the answer of the defendant, is not in good faith, as the said answer distinctly avers that the defendant is making, using, and vending machines for nailing boxes as "described and claimed" in the patent, to which the original of Exhibit No. 4 pertains. But in order to meet the technical part of the objection, the question is withdrawn.)

Q. 12. Look at the copy of Patent No. 172579, now shown you, and at the model Exhibit No. 4, and state whether or not, with the exception of the treadle and treadle-spring, said model embodies in shape and arrangement the devices illustrated in said copy patent?

A. It does.

(Complainant's counsel calls for the production of the patent No. 172579, on the part of the defendant, and gives notice that unless such patent is produced, the copy thereof, referred to in the last question and answer, will be used in evidence, and for purposes of identification is now marked Copy of Ostrum's Patent, J. A. S., Examiner, June 6th, 1876.)

Q. 13. Question 11 repeated.

(Same objection.)

A. I find in Model Exhibit No. 4 grooved guides, which retain the nails, and guide them to the proper place. The guides do not enclose the nail all around, because the machine is placed in a horizontal position, in which position it is not necessary to prevent the nail from falling out. The grooved guides are parellel to the plungers, and the nails are pushed out of those grooved guides by the plungers. I consider those grooved guides substantially the same as the grooved guides described in complainant's patent, and referred to in the first claim thereof, where they are called "grooved spring jaws," with the exception that those parts of the grooved jaws which, in consequence of the altered position of the machine Exhibit No. 4 become unnecessary, while the principal parts, grooves for holding and guiding, are retained.

I also find in the Model Exhibit No. 4 the combination of grooved guides and reciprocating plungers, constructed and operating substantially as and for the purpose described in complainant's patent, and referred to in the second claim thereof. I have already stated that the grooved guides, or jaws, are substantially the same as the grooved spring jaws referred to in the patent, with the exception of those parts which become unnecessary in consequence of the horizontal position of
the machine. The reciprocating plungers are substantially the
47 same as the rising and falling plungers in complainant's patent. By placing the vertical machine in a horizontal position the

rising and falling plungers become horizontally reciprocating plungers, without altering the character of the machine, or the result produced.

The operation of the two devices, namely, the grooved guides and the reciprocating plungers, is the same in both machines, and the nails are placed into the grooves, pushed out of the grooves by the plungers, and driven into the articles to be nailed.

I also find in Exhibit No. 4 the mechanical equivalent of the combination of the cam, gate, and treadle, for the purpose of producing reciprocating motion of the plungers, as specified in the fourth claim of complainant's patent, with the exception of the circular portion, *e*, *f*, which allows the cam to be turned more or less, without depressing the gate any further than desirable. This part is in Exhibit No. 4 replaced by a positive stop arrangement, frequently used in machinery, to limit motion in a certain direction, and which I also consider a mechanical equivalent of the circular portion, *e*, *f*, as it accomplishes the same object by well-known mechanical means, without altering the character of the machine, or the result produced.

I also find in Exhibit No. 4, taking into consideration the statements in regard to the adjustable slides, a series of adjustable carriages, a table, and an abutment, and also a slide, the whole constructed and operating substantially in the manner and for the purpose specified in the complainant's patent, and referred to in the fifth claim thereof. The adjustable carriages in Exhibit No. 4 hold the plungers, and allow their adjustment at different distances, as in the complainant's patent. The transverse bar on the top of the table in Exhibit 4, which in Ostrum's patent is called the rest B, is an adjustable abutment, which receives the thrust of the plungers, and prevents the boards from yielding while the nails are being driven by the plungers. It is adjusted by screw motion, and I consider it substantially the same as the table J in complainant's patent, and referred to in the fifth claim thereof, operating in the same manner, and producing the same result. The machine Exhibit No. 4 being in a horizontal position, the face of the abutment necessarily is vertical, while as shown in complainant's patent it is horizontal.

The slide referred to in the question is substantially the same as the slide L, shown and described in complainant's patent, and referred to in the fifth claim thereof.

In conclusion, I would state that I do consider the organization of the machine in Exhibit 4 substantially the same as the organization of the machine shown and described in complainant's patent—producing the same results by substantially the same means.

Q. 14. Do you find in complainant's patented machine anything that would prevent its use in a horizontal position?

A. I do not.

Q. 15. Do you find defendant's machine, Exhibit 4, to be capable of use in a vertical position?

A. No.

Q. 16. What change, then, has there been made by the defendant from complainant's machine that confines his, defendant's, machine to a horizontal position?

(Objected to, as calling for a conclusion that some change has been made, and as incompetent and immaterial.)

48 A. Those parts of the grooved guides have been omitted which are necessary to hold the nails in a vertical position and release that hold when it is no longer required.

Q. 17. State whether or not you find in Exhibit No. 4 any difference

of a substantial character from complainant's patent other than the omission of part of each nail-guide, and the placing of the machine from a vertical into a horizontal position.

A. No difference of a substantial character.

Q. 18. From your acquaintance with box-nailing machines, which position would you deem most advantageous, the vertical or the horizontal? Please give your reason for your opinion.

(Objected to as incompetent, immaterial, and that witness has not been shown to be familiar with box-nailing machines.)

A. The vertical position, because the operator, standing in front of the machine, can see to the work much better than in a horizontal machine, where the rear part of the plungers and grooved guides is covered by the vertical board to be nailed to the horizontal board.

Q. 19. What advantage is it to the operator to be able to see the work?

(Objection to Q. 18 repeated.)

A. If a nail should be missed, or badly driven, he will see it at once.

Cross-examined:

X Q. 20. Have you ever seen a machine such as is represented by Exhibit No. 3?

(Objected to on the ground that the illustration on Exhibit No. 3 is not sufficiently clear to give an idea of the machine which it represents.)

A. I have not.

X Q. 21. Have you ever seen such a machine as is represented by Exhibit No. 4?

A. I have not.

X Q. 22. What do you understand by the combination of the spring jaws H of the rising and falling plungers E, as stated in the second claim of complainant's patent?

(Objected to as calling for a legal opinion.)

A. I understand by the combination, the placing together of the two elements, namely, first, the spring jaws, and second, the rising and falling plungers, constructed and operating substantially as and for the purpose described. And I understand that the specification is to be referred to for a proper explanation of what these elements are and how they operate. I have already fully stated that the spring jaws as shown and described are grooved guides for holding the nails and guiding them to the proper place; also that the rising and falling plungers are reciprocating plungers for the purpose of driving each nail singly and all at the same time.

X Q. 23. State, if you can, what result is produced by that combination.

49 A. There is a mutual action between the grooved guides and the plungers. The grooved guides keep the nails in a proper position for the plungers and guide them to their proper place while the plungers are operating and pushing the nails out of the guides.

X Q. 24. State, if you can, what effect is produced by the arranging of the plunger E, with disk-shaped collar I, or its equivalent, with the spring jaws H, as stated in the third claim in complainant's patent.

(Objected to as immaterial, as it does not appear that the defendant intringes the third claim.

By defendant's counsel, upon the admission contained in this objection, that defendant does not infringe the third claim, question is withdrawn.)

X Q. 25. State, if you can, what effect or result is produced by the arrangement and combination of one or more adjustable carriages F, table J, and slide L, constructed and operating in the manner set forth, and as claimed in the fifth claim of complainant's patent.

A. By this arrangement the parts are so adjusted that the boxes to be nailed can be inserted in such a manner that the nails will be driven in the proper position and to the proper depth, and that the ends of the boards will be even.

X Q. 26. Is that the only effect or result which you discover that is produced by that combination?

A. The combination makes the machine a practical box nailing machine.

Adjourned to Wednesday, June 7th, at 11 a. m.

WEDNESDAY, *June 7th*, 1876.

Met pursuant to adjourment. Present, counsel as before.

Continuation of the cross-examination of A. FABER DU FAUR:

X Q. 27. In your testimony of yesterday, you state as follows: "I find recited in the first claim, grooved spring jaws, which, as I have already stated, are grooved guides for holding and guiding the nails; as I understand it, these grooved guides must form part of the nailing machine." I ask you to explain what, if any, difference there is between grooved spring jaws and grooved guides, and why they must form part of the machine.

A. The grooved spring jaws as described in the specification of complainant's patent are grooved guides, but grooved guides are not necessarily spring jaws. The grooved guides must form part of a nailing machine, because it is stated in the claim as follows: "For the purpose of receiving the nails, and to guide them to their proper places." From this, and from the fact that the patent refers to a machine for nailing boxes, I infer that the first claim is not intended to broadly cover grooved spring jaws or guides, but only such devices when used in a box-nailing machine for the purpose of holding the nails and to guide them to the proper place.

(The last part of the answer objected to by defendant's counsel as not responsive.)

50 X Q. 28. In a portion of your answer to Q. 6 of yesterday you state as follows: "The nail is held in position until the plunger strikes it, then until the point of the nail passes into the wood." Do I understand from that that no such device is required to hold or guide the nail after its point has entered the wood?

A. The point must have entered some distance into the wood, and the exact distance forms a matter of adjustment of the machine. After the point has entered into the wood, and towards the end of the stroke, the head of the nail only can be guided, and this head finally, of course, will have to leave the guides.

X Q. 29. In your testimony of yesterday you speak in one or more instances of a mechanical equivalent; please state what constitutes a mechanical equivalent as understood by the patent laws.

(Objected to as incompetent, and as the witness is not a patent lawyer, and not able, therefore, to state what the "law understands."

The last six words of the question are withdrawn by defendant's counsel.

Complainant's counsel objects to the question as amended as indefinite.)

A. Mechanical equivalents are devices which may be mutually exchanged in a machine without altering the character of the machine or the result produced.

Redirect:

R. D. Q. 30. What did you mean by your answers to questions 20 and 21?

A. I hadn't seen such machines. That is to say, machines identical with the machine represented by the drawing in Exhibit No. 3, or by the model, Exhibit No. 4, where the plungers move in a horizontal direction.

R. D. Q. 31. In what material respect, if any, did the nailing machines which you saw differ from Exhibit No. 4, aside from position of the machine?

A. In no material respect; the organization of the machines is substantially the same.

R. D. Q. 32. Please answer X Q. 23, taking into consideration the state of the art, as specified in complainant's patent.

A. The nails can be driven on the machine at one continuous stroke, which could not be done by holding the nails by hand; and a number of nails can be driven simultaneously on the machine by one man, while one man could not hold a series of nails at different places with his hands and drive them simultaneously by the use of a hand hammer.

R. D. Q. 33. To what position of the nails has your answer to X Q. 25 reference?

A. The adjustable carriages admit the adjustment of the plungers at the proper distance apart, at which the nails are to be driven.

R. D. Q. 34. Am I to understand you to say in answer to X Q. 26 that without the slide L the machine would not be practicable?

(Objected to as leading.)

51 A. I did not mean to say that the machine would not be a practicable machine without the slide L, but it wants something performing the functions of the slide L to make the machine perfect. The slide L regulates the distance between the first plunger and the end of the box. Now as this plunger is itself adjustable, the slide L may be permanently fixed and the machine would operate in substantially the same manner. But then for different lengths of boxes the position could not be adjusted symmetrically from the centre. The action of the carriage would be one-sided, and for this reason a removable slide is preferable. The other function of the slide is to keep the ends of the boards even, and this function also is performed in the same manner whether this part be movable or stationary.

R. D. Q. 35. In examining the first claim of complainant's patent, what do you understand the word "receiving" in said claim to describe in contradistinction to the word "holding," which has heretofore been referred to?

(Objected to as incompetent.)

A. I understand by the word "receiving" that the nails are to be placed into the grooved devices, and that those grooved devices shall have space to contain them, while the word to "hold" is used in a double sense of containing and grasping.

Recross:

Re X Q. 36. Did you ever see one of defendant's machines?

A. I did not, except the model Exhibit No. 4.

A. FABER DU FAUR.

Subscribed and sworn to before me this 7th day of June, 1876.

JOHN A. SHIELDS,
Examiner.

Counsel for complainant offers in evidence press copy of a letter sent by him to the defendant February 18, 1876, and the answer of George Terry, dated February 21st, 1876, thereto, and they are marked complainant's Exhibits Nos. 8 and 9 respectively.

The genuineness of said papers is admitted by defendant's counsel.

Complainant's Exhibit No. 8.—June 7th, 1876.—J. A. S., Ex'r.

FEB. 18, 6.

H. P. OSTRUM, Esq.,
New Haven, Conn.:

DEAR SIR: I am instructed by Mr. W. Wicke, of this city, to inform you that by making, using, and selling certain machines for nailing boxes you infringe on his patent No. 38924 of June 16th, 1863.

52 You are herewith requested forthwith to abstain from all further infringement of said patent, or violation of said rights, and to render an account of the infringing machines already built by you, and of their present whereabouts; also to pay the damages occasioned by your past infringements. If this request is not complied with within 10 days, suit will be brought.

I may add that Mr. Wicke's above patent has already been fully sustained in court.

Yours, respectfully,

A. v. BRIESEN,
Attorney for W. Wicke.

Complainant's Exhibit No. 9.—June 6th, 1876.—J. A. S., Ex'r.

Mr. BRIESEN:

DEAR SIR: Your letter of the 18th ultimo, addressed to Henry P. Ostrum, of this city, is before me.

The specification and the accompanying drawing of the patent issued to Wicke, of New York, June 16th, 1863, No. 38924, is also before me.

The machines made and sold by Mr. Ostrum, and recently patented by him, in no particular infringe Wicke's patent with its badly drawn claims.

Your request, therefore, that Mr. Ostrum render an account of the machines he has made and sold; that he tell where they are, and that he pay damages for making and selling his own patented machines, will not be complied with in any of its particulars.

Mr. Wicke can put his threat in execution within the ten days he has prescribed for himself.

Mr. Wicke, of your city, may yet learn that visiting my agents in your city, ordering them to stop advertising and selling my machines; ordering them what disposition they shall make of my machines, and otherwise meddling with my business and property, is an unwarrantable proceeding, and that the ownership of a patent is no justification of such conduct.

Respectfully, yours,

HENRY P. OSTRUM,
By GEORGE TERRY,
Counsellor in Patent Cases.

298 CHAPEL STREET, NEW HAVEN, CONNECTICUT,
Feb. 21st, 1876.

Complainant rests.

Testimony taken on behalf of complainant, in rebuttal, under and pursuant to rule 67 of the Supreme Court, in equity, as amended, before John A. Shields, Esq., examiner.

NEW YORK, *October 19th*, 1876—11 a. m.

Present, A. von Briesen, esq., counsel for complainant, and N. A. Calkins, esq., counsel for defendant.

53 THOMAS R. ALMOND, a witness called on behalf of complainant, being duly sworn, testifies as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Thomas R. Almond; age, 31 years; residence, 47 Concord street, Brooklyn, N. Y.; and occupation, machinist.

Q. 2. Since when have you been a machinist?

A. Since 1861.

Q. 3. Please specify more fully what you mean by the term machinist, as used in your first answer.

A. I understand by the term machinist that I have practically constructed machines of various descriptions, part of the time for myself, and part of the time for employers.

Q. 4. State whether or not you are also an inventor, and, if so, whether or not you have obtained patents for your own inventions, and understand the drawings, specifications, and claims, and other parts connected with letters patent.

(First part of the question objected to as being incompetent.)

A. I understand myself to be an inventor; I have taken out several patents; I think I have a very good general understanding of specifications and drawings of letters patent.

Q. 5. Have you read and examined the letters patent of George Wicke, here in controversy, and do you understand the invention described in the same?

A. I have examined that patent thoroughly, and understand the invention completely.

Q. 6. Have you examined a nailing-machine, constructed in accordance with said patent, and did you see the same in operation; if so, when and where?

A. I have seen a machine constructed in accordance with said patent; I saw it in operation either Wednesday or Thursday of last week, at 181 Lewis street, New York City; I don't know the name of the parties in whose place I saw it.

Q. 7. How came you to see that machine?

A. I went to Uptegrove and Gedney, 469 East 10th street, and requested to see a nailing-machine, which I understood them to be the manufacturers of. I afterwards found out that they were the agents for the Ostrum nailing-machine. I was taken to 181 Lewis street by the gentleman whom I saw in their office, and shown the machine in operation; I found the machine to be practically the same as the invention described in Wicke's patent.

Q. 8. Was that machine represented to you as one of Ostrum's nailing machines?

A. It was.

Q. 9. Look at the model, Complainant's Exhibit 4, and state in what respect, if any, the Ostrum machine, which was shown you last week, differs from, and in what respect it resembles the machine represented by this model.

(Objected to as incompetent.)

A. In the first place the series of plungers, which are shown in this model (Exhibit 4), are all joined together in that machine, or formed in one solid piece, as represented in this model which I now produce.

54 (Model produced by the witness is offered in evidence by complainant, and is marked Complainant's Exhibit, No. 6, J. A. S., examiner.

Objected to by defendant's counsel as incompetent and improper, and as not being proper rebuttal, and as it is not shown what such model represents, if anything.)

WITNESS continues: I found that this series of plungers, or plunger, was held in position by suitable guideways, and operated by a cam pivoted and connected with a treadle beneath the table of the machine, in a similar manner to the models Exhibits 4 and 6. That there were also a series of grooves formed in the bed or table of said machine, into which a corresponding series of projections formed on the above mentioned plunger arrangement fitted. In this respect it differs from Exhibit 4, in that these grooves are formed in separate pieces which slide (in Exhibit 4) each one for itself, in a suitably formed groove in the bed of the table in Exhibit 4. I found also a cross-bar, supported by brackets, and two adjustable guide-pieces situated on said part, which said guide pieces do not exist in the model Exhibit 4. I also found a bar and two side pieces, the bar parallel with the just-mentioned bar, which supports the guide-pieces, and at right angles with the side pieces, said side pieces being drilled with holes from one end to the other, each one the same, into which pins situated on the cross bar fitted; in this respect it differs from Exhibit 4 in that said side pieces in Exhibit 4 have notches into which corresponding projecting pins fit. I found that the peculiar arrangement of gear and screw motion for operating the side pieces, shown in Exhibit 4, did not exist in this machine. I found that the treadle which operates the cam for driving the plunger arrangement was connected with the cross-bar by a spiral spring, which does not exist in Exhibit 4. I found an arrangement for advancing the cross-bar, situated on the side pieces, and across the table. The object of this was to give a forward motion in the direction of the plunger arrangement, by which movement anything situated between this bar and a slight projection or shoulder, existing at the termination of the grooves formed for receiving the nails, as shown in Exhibit 6, may be held; in this respect it differs from Exhibit 4, said object being accomplished by the gear and screw arrangement in Exhibit 4. I do not find any essential difference between Exhibit 4 and the machine I saw.

Q. 10. Did you make Exhibit 6; and if so, what does it represent?

A. I made it; it represents the plunger arrangement in the machine I examined, and also the cam and treadle motion in that machine.

Q. 11. Did you also examine, at the establishment of plaintiff, a machine made according to Wicke's patent; and if so, when, and did you see it in operation?

A. I saw a machine made in accordance with that patent, in operation, on the 18th day of October, 1876, at the establishment of Mr. Wicke, 155 Goerck street, New York City.

Q. 12. Look at the model Exhibit No. 5, and state in what respect, if any, it differs from the machine you saw in operation in Mr. Wicke's establishment.

(Objected to as incompetent, and not proper rebutting testimony, and as Exhibit No. 5 is not properly in evidence.)

55 A. I see no difference whatever, with the exception that the

spring jaws in Mr. Wicke's working machine were all arranged in the same way as the middle joint in Exhibit No. 5.

Q. 13. Please compare the model Exhibit No. 5 with complainant's patent, and state whether or not it correctly represents the machine illustrated in said patent.

(Objected to as not proper rebutting testimony, and as the witness is not shown to be an expert.)

A. I find that the cam arrangement for operating a series of plungers by the intervention of a suitable gate is exactly as represented in the patent. That the connection between the treadle and the cam arm is exactly similar. That the curvatures on the cam are the same; that the table and screw for advancing said table are the same; that the guide-piece formed on the columns or table-bed is the same; that the treadle is brought back to its normal position by a spring situated on the plungers, in the manner represented in the patent. I find in the model Exhibit No. 5 a flat spring beneath the treadle which I do not find in the patent. I find also a spiral spring connected with the cam shaft, and the frame of Exhibit 5, which does not appear in the patent. I find in the model a series of plungers, but in the patent but one. I see no other essential difference between Exhibit 5 and the patent drawing, excepting that the spring jaw represented in the patent drawing is represented in the model as turned one-quarter around, or it makes an angle of 90 degrees, with the spring jaws represented in the patent. I would state also that I find a slot cut in the side of said spring jaw in Exhibit 5 which does not appear in the patent. In the model Exhibit 5 there are three plungers having 3 pairs of spring-jaws, two of which are turned at right angles to the centre one, said centre one exactly representing that illustrated in the patent.

Q. 14. You say that in Exhibit 5 you find a series of plungers, and in the patent but one. What does the patent state about the number of plungers?

(Objected to, as the patent speaks for itself.)

A. The words in the patent are as follows: "That is, consists further in combining with said spring-jaws a corresponding number of rising and falling plungers."

Q. 15. Do you find the change in the position of the jaws, Exhibit 5, to effect the operation of the machine? If so, in what respect?

A. I do not find that it effects any change whatever, unless that the nails would have to be put in the side instead of the front; unless a suitable aperature be made in the front to allow the nails to pass, which could be easily done.

Q. 16. What do you find to be the object or effect of the treadle-spring and back spring in Exhibit No. 5, as contra-distinguished from the object and effect of the springs on the plungers?

(Objected to, as it is not shown that the witness is an expert.)

A. I find that the spring on the treadle and the back-spring will each act to bring the cam and the treadle to its normal condition. I find that the springs on the plunger will bring the gate, cam, and treadle to their normal position without any aid from the other springs—the plungers also.

56 Q. 17. Do you find the model, Exhibit 5, to be operative or inoperative when the back spring and treadle-spring are not used?

A. I find that it will work perfectly without the aid of either of these springs.

Q. 18. In what position do you find the machine described in com-

plainant's patent to be necessarily placed in operation; I mean with reference to the position of the plungers?

A. I should say that the machine may be placed either vertical or horizontal, the only alteration necessary from the vertical to the horizontal position being simply the removal of one-half of the spring jaw; the other half will then be suited for receiving the nails to be driven, and also in so placing the treadle that it may be operated by the foot.

Q. 19. According to your knowledge as a mechanic and inventor, does it require the exercise of inventive talent or genius to place the machine described in complainant's patent into a horizontal position, and omitting one-half of each jaw and changing position of treadle and frame support?

(Objected to as incompetent and immaterial.)

A. I do not think it does. My experience is that the most ordinary mechanic would be able to effect such a change without any trouble.

Q. 20. What substantial difference, if any, do you find between Exhibit 4 and complainant's patented machine if placed horizontal? In your answer consider the upper cross-bar of Exhibit 4 to be provided with an adjustable slide.

(Objected to as incompetent and not proper rebutting testimony.)

A. I see no very material difference; the operation would be the same in both cases.

Q. 21. Which position do you find to be superior in practical use, the vertical or the horizontal?

(Same objection.)

A. The vertical.

Q. 22. Why?

(Same objection.)

A. Because it is only necessary to have one person to operate the machine, he being able to see that the nails are correctly in position and also convenient for placing the nails in position, where, in the horizontal position, it would be necessary to employ, to advantageously run the machine, another person.

Q. 23. How do you know this to be the case?

(Same objection.)

A. I have seen the machines in operation, one made under Wicke's patent, and one machine made under Ostrum's patent. In the one case, namely Wicke's, it was very evident that but one person was necessary to do all that was required, but with Ostrum's machine I saw that they must have two persons to operate it to advantage, and they did have two persons. There is one very great advantage in having the machine in a vertical position; the nails may be driven without regard to their shape, the heads may be large or small; whereas, in the horizontal
57 position, it becomes necessary to use nails having small heads, and it seems to me that the smaller the head of the nail the better. By using the machine in a vertical position, and by employing a suitable arrangement similar to the spring jaws described in Wicke's patent, nails of all ordinary shapes may be used. It is necessary to have a V-shaped groove, or an approach to it at least, when the machine is used in the horizontal position; therefore, if the head of the nail be large the body of the nail will deviate so much from a horizontal position that it could not be driven home in thin material without danger of the point of the nail coming out of the side of the material, whereas in the vertical position, and by the employment of suitable spring jaws or any other suitable device, the body of the nail may be held vertical, or, if found desirable, at a slight angle to the body of the

material in which the nails are to be driven, and yet be driven direct in a line with the plunger; on this account the superiority of the vertical position is self-evident.

Q. 24. Look at the circular marked Exhibit 3, and state whether or not the machine which Mr. Ostrum's agents showed you in Lewis street was substantially like the machine there illustrated and marked Patented January 26, 1876.

A. I see no important difference whatever, with the exception that there was suitable tin funnels for feeding in the nails.

Q. 25. Tin funnels more or less like the funnel shown in Figure 1 of complainant's patent?

A. Almost identical, the aperture at the small end being considerably more elongated than in Wicke's patent.

Q. 26. From your description of the Ostrum machine which was shown you, am I to understand that the nail guides therein were as in Exhibit 4, but all rigidly united, and the plungers of Exhibit 4 also rigidly united?

(Objected to as leading.

Question withdrawn.)

Q. 27. What would have to be done to the nail-guides and plungers of Exhibit 4 in order to make them like the nail guides and plungers of the Ostrum machine which was shown you?

A. Simply to rigidly unite the nail-guides and shape the plungers to fit them more accurately. In Exhibit 4 the plungers are made adjustable, which is not the case in Ostrum's machine as seen in operation. This is all the essential difference necessary to make the plungers of Exhibit 4 like the Ostrum machine I saw in operation.

Q. 28. State whether or not the plungers in the Ostrum machine which you saw were also rigidly united.

(Objected to as leading.)

A. They were.

Q. 29. Does it in your opinion involve the exercise of inventive genius to rigidly unite the jaws and to rigidly unite the plungers of Wicke's patent?

(Objected to as incompetent and not proper rebutting testimony, and as leading.)

A. No more than is necessary to place a horizontal steam-engine from the horizontal to a vertical position.

58 Q. 30. Which is the superior form of machine, that having separately adjustable nail guides and plungers, or that having rigidly united nail-guides and plungers?

(Objected to as incompetent and immaterial, and not proper rebutting testimony.)

A. That having adjustable most decidedly, for the reason that the nails may be driven close together or farther apart as the case may require, so that one part of the box may be nailed more strongly at one part or another, as may be desired.

Q. 31. Two persons who pretend to be mechanical experts have testified for the defendant in this cause that the cam C, shown in complainant's patent, would not be brought back to its normal position by springs placed on the plungers, and that for raising the treadle special mechanism not invented by Wicke would first have to be invented, and that therefore Wicke's patented nailing machine was inoperative. What is your opinion on these points?

A. My opinion is, and it is a positive fact, that they are incorrect, or that such a statement is incorrect, and that the springs will operate to

bring the cam back to its normal condition, both as Exhibit 5 is constructed, as the patent drawing shows, and as the very first machines constructed by the inventor, Mr. Wicke, are made, all of which I have seen in actual operation.

Adjourned to Thursday, October 26, 1876, at 11 o'clock, a. m.

THURSDAY, *October* 26, 1876—11 o'clock a. m.

Pursuant to adjournment.

Present, A. v. Briesen, esq., of counsel for complainant.

Adjourned at the request of defendant's counsel to Wednesday, November 1st, 1876, at 11 o'clock, a. m.

WEDNESDAY, *November* 1*st*, 1876—11 o'clock a. m.

Pursuant to adjournment.

Counsel present as before.

Examination of THOMAS R. ALMOND continued:

Q. 32. Read your last answer and state whether or not you have seen the springs of the plungers on a Wicke machine to raise the treadle and gate.

A. I did see the springs to raise the gate and treadle, and they produced that effect in a very effectual manner.

Q. 33. Did you make a specimen of nailing to show the effect produced by the Wicke machine and by the Ostrum machine, and if so, will you produce the same?

(Objected to as incompetent and immaterial, and as not proper rebutting testimony.)

A. I did, and I produce the same.

(The specimen produced by witness is offered in evidence by counsel for complainant, and is marked. Complainant's Exhibit No. 7, J. A. S., Ex'r.

59 (Objected to as incompetent and immaterial, and as not proper rebutting testimony.)

Q. 34. I have on Exhibit No. 7 marked the three nails, A, B, and C. Please state, with reference to that exhibit, how the nails would be driven by the Wicke and Ostrum machine respectively.

(Same objection.)

A. The nails A and C are represented as they would be driven by the aid of the springs or guiding apparatus in the Wicke machine. They show that the nails will be driven into the body of the material, be it thick or thin, without any danger of the points projecting through the sides of the material. The nail B in Exhibit 7 shows what the result would be if such a nail were driven by the Ostrum machine; the cause of the perfect result produced by the Wicke machine being due to the fact that the nail is held in a correct position in relation to the material, whereas such a position for the nail is impossible to be attained in the Ostrum machine. In said machine, the grooves or guiding channels have to be made in such a manner, that nails such as are represented in Exhibit 7 would make such an angle with the material into which they are to be driven that their points must necessarily, after the nails are driven home, project through the sides of such material, in case such material be not sufficiently thick to avoid such result. This shows the Wicke machine to have a great advantage over the Ostrum. I wish to state that when a nail having an ordinary sized head, such as a commercial tack has, it will, when placed in the grooves or channels of the Ostrum machine, assume not the horizontal position or a close

approach thereto, but the position having a considerable angle to the position of the material into which said nails are to be driven.

Q. 35. In your answer to Q. 9 you mention a cross-bar which you noticed on the Ostrum machine, and to which the treadle spring was secured. Do you observe that cross bar in Exhibit 3?

A. I do. Said cross bar forms part of the frame of the machine, and seems to be for the purpose of holding the frame of the machine together and also for connecting the springs thereto. I mean by the aforesaid cross-bar the rod shown in Exhibit 3 as connecting the two front legs together and to which the spring which is secured to the treadle is made fast.

Cross-examined:

X Q. 36. You say you are a mechanic. Are you at present working on your own account or for other persons?

A. I am at present working on my own account; manufacturing my own patented articles.

X Q. 37. How long since you have worked for other parties?

(Objected to, as the witness states that he does not work for other parties.)

A. About three years.

X Q. 38. Whom did you work for last?

A. The Haskins Machine Company, Fitchburg, Massachusetts; previous to that I worked for the Aldine Type Distributing Company of New York, where some of the most complicated machinery in existence was being made, on which machinery I was employed for nearly a period of two years. Previous to that I worked for the Putman Machine Company of Fitchburg, Massachusetts, constructing various parts of such machines as engine-lathes, steam-engines, gear-cutting machinery, air compressors, &c.

(All that part of the answer showing the kind of work on which witness has been employed objected to by the defendant's counsel as not responsive.)

X Q. 39. How long have you been a resident of Brooklyn, where you now reside?

A. Since December last.

X Q. 40. Where did you reside previous to that?

A. From April, 1875, I was travelling in England and the United States. Previous to that my residence was Fitchburg, Massachusetts.

X Q. 41. You say that you have invented machines. Please name the different kind of machines which you have invented.

A. The first which I have any distinct recollection of is a reversing motion for steam-engines. I was then about 18 years of age. I received a diploma from the Industrial Exhibition held in London England, in '66.

(This part of the answer objected to by defendant's counsel as not responsive.)

I am in possession of both the model of the invention and said diploma. My next important invention was an adjustable skate, for which I secured a patent in the United States. After that I invented a drill chuck, which I patented or got patented. After that I invented the adjustable bearing, used on the Haskins steam-engine; I obtained a patent for that. I then invented the "Pocket Stove," for which I secured a patent. My next invention, I think, was the device known as the "Almond Drill Chuck," which I now manufacture. I have also recently secured a patent for a "Vapor Burner," for producing a heating flame from kerosene oil resembling a flame produced by the combustion of

alcohol, having neither smoke nor smell. There are various other inventions which I have not yet made public.

X Q. 42. How many letters patent have you ever read and examined, other than those procured by your own inventions?

A. I couldn't say. I have been in the habit of reading the decisions of the Commissioner of the Patent Office, and also examining some of these patents to which such decisions relate, for the purpose of instruction.

X Q. 43. Are you acquainted with Mr. Wicke, the complainant in this case?

A. I never saw him until two or three days before my testimony was commenced in this case.

X Q. 44. How came you to see him then?

A. After having seen the model of his nailing-machine, Exhibit 5, I desired to see the actual machine in operation, and to that end went to Mr. Wicke's establishment, and there saw the gentleman for the first time.

X Q. 45. Was that occasion the first on which you ever saw a Wicke nailing machine?

A. No.

X Q. 46. When did you first see it?

A. I first saw a nailing-machine in Mr. Briesen's office, marked Exhibit 5. The first actual machine that I saw in operation was at Mr. Wicke's establishment at the time stated.

61 X Q. 47. You say that you saw a nailing-machine at 181 Lewis street, N. Y., constructed in accordance with the letters patent granted to George Wicke. You also state that that was represented to be an Ostrum nailing-machine—is your answer that such machine was constructed in accordance with the Wicke patent correct?

A. I am convinced that the features of the machine for producing results obtained are identical with the Wicke patent.

X Q. 48. Did that machine have the spring jaws described in Wicke's patent?

(Objected to as already answered.)

A. No; it had what I regard as an inferior substitute.

X Q. 49. Did it have such a cam as is shown and described in Wicke's patent?

(Same objection.)

A. It had a cam identical in principle, which cam was constructed to embrace a pin to operate the plungers. In this respect it differed from the Wicke patent, because in that the cam was embraced instead of embracing.

X Q. 50. Was there on that cam any circular portion, "*e f*," such as described and shown in Wicke's patent?

A. No.

X Q. 51. Was there in that machine such an adjustable table as is shown and described in Wicke's patent?

A. I have already described the exact character of that table, and the means of adjusting it.

(Answer objected to as not responsive.)

X Q. 52. Question repeated.

A. No. The table in that machine was different, but the bar which represents the table in the Wicke machine was there, it being operated by a device peculiar to the machine itself, this device being a substitute for the screw used in advancing the table on Wicke's machine. I

should have said that the table was different, particularly in regard to this respect only.

(All of the answer after the word "No," objected to as not responsive.)

X Q. 53. Did you find on that machine such a cam-shaft as is described in the Wicke patent?

(Objected to, as Wicke's patent lays no claim to a cam-shaft.)

A. The cam shaft in the Ostrum machine was represented as simply turned one-quarter round: that is to say, placed parallel with the table instead of at right angles, as in the Wicke machine.

X Q. 54. Did you find in that machine a rising and falling plunger or plungers, with a globe or disk-shaped collar, such as is described in Wicke's patent?

A. I have already described the kind of plunger arrangement used on said machine.

(Answer objected to as not responsive, and)

62 X Q. 55. Question repeated.

A. No.

X Q. 56. Did you find in that machine an adjustable carriage, such as shown and described in the Wicke patent?

A. I found instead of the adjustable carriage, as represented in the Wicke patent, a series of grooves or channels.

(Answer objected to as not responsive, and)

X Q. 57. Question repeated, and a categorical answer requested.

(Counsel for complainant objects to the request as improper, and requests that the witness be instructed that he is at liberty to answer every question in accordance with his own views of propriety and response.)

A. I found in that machine the adjustable carriages represented in the Wicke machine rigidly joined together, or, in fact, formed in one solid piece.

X Q. 57½. In view of your last answer, they were not adjustable, were they?

(Objected to, as intentionally misleading the witness.)

A. They were not, but might be made so by simply disconnecting each groove from its neighboring one and not securing them rigidly to the bed of the machine.

(Last part of the answer objected to as not responsive.)

X Q. 58. Did you find in that machine such a gate as is shown and described in Wicke's patent?

A. In Wicke's patent the gate has two functions, one for embracing the cam and the other for making the connection between said cam and the plungers. In the Ostrum machine this gate is formed so that the cam embraces and the connection between the plungers and cam is unbroken.

X Q. 58½. Is the gate in that machine represented in Exhibit No. 6?

A. The gate in what machine?

X 59. In the machine you saw in Lewis street.

A. It represents it in that it is a sliding gate moving in suitable guideways, and arranged to be operated by a cam in the same manner as that in the Ostrum machine.

X Q. 59½. Is the cam which you saw in the machine in Lewis street accurately represented in Exhibit No. 6?

A. It is not accurately represented, but closely resembles it, being a cam of the same general character, the difference being more particular in regard to curvature, &c.

X Q. 60. Is there such a device shown in Exhibit No. 6 as a cam?

A. Yes.

X Q. 60½. Do you know what a rock-shaft is?

A. I do.

X Q. 61. Is there a rock shaft shown in Exhibit No. 6?

A. There is not, correctly speaking, a rock shaft in Exhibit No. 6.

63 X Q. 61½. Is there any difference between a rock-shaft and a cam?

A. I will give you "Webster" as my authority on that point.

Witness takes Webster's Dictionary and reads:

"Cam, a projecting part of a wheel, or other moving piece, so shaped as to give an alternating or variable motion of any desired velocity, extent, or direction to another piece pressing against it by sliding or rolling contact. It is much used in machines involving complicated and irregular movements, as in a sewing-machine, pin-machine, &c." "Rock-shaft"—"Webster's" definition—"A shaft that oscillates on its journals instead of revolving; more strictly a vibrating shaft for modifying motion in the valve-gear of a steam-engine; called also rocker and rocking shaft."

Yes, there is a difference which I would describe. The cam has a sliding motion, and does not require a connecting shaft, which is necessary to the proper working of a rock-shaft.

X Q. 62. You say that the grooves shown in Exhibit No. 6 represent the grooves shown in the machine you saw in Lewis street; do they exactly represent them as they are made in that machine?

A. They represent them very closely; it may be, and in fact I think it is, that the bottoms of the grooves in Exhibit 6 are somewhat sharper than the grooves in Ostrum's machine. In other respects they resemble them.

X Q. 63. Were not the grooves in the machine which you saw cut deeper at one end than the other?

A. I believe they were. The difference was not very perceptible, not sufficiently so to bring a nail having a large head to its horizontal position. If they were cut much deeper the nail in being driven forward would have an irregular motion. The head of the nail in ascending the inclined plane formed by such a groove would have a constantly ascending motion, whereas the body of the nail must necessarily assume a horizontal position.

It will thus be seen that whilst the body of the nail must keep in the position in which it first enters the material, the head of the nail will constantly tend to leave that position, thereby tending to split the material. I observed that small-headed nails were used in this machine—a necessary consequence resulting from the use of such an arrangement; it did not seem possible to drive large-headed nails into thin material with this machine without producing the effect shown at *b* in Exhibit 7. In nailing together such material as that which grape-boxes are made of, &c., nails having large heads must be used, otherwise the box would scarcely be sufficiently strong.

X Q. 64. What kind of nails are usually used in making cigar-boxes?

A. Some having large heads and some small, the idea being, it seems to me, to use those nails which are best suited to the machine for driving them. It is self-evident that a nail having a head on it is superior for such work to a small-headed nail. I mean by this a nail flattened out at its proper extremity.

X Q. 65. You say that the nail in passing out of the grooves in the Ostrum machine would have to ascend the incline of the groove; is

there any such device shown in the Wicke patent as to produce such a result?

A. There is. If the Wicke machine be used in the horizontal position, and the spring jaws arranged as shown by the two outside
64 spring jaws of Exhibit 5, the simple removal of the upper jaw would show identically the same construction as the grooves in the Ostrum machine, excepting, perhaps, that the recess receiving the nail is somewhat more curved than the recess for receiving the nail in the Ostrum machine.

(All after the words "there is" objected to by defendant's counsel as not responsive.)

X Q. 66. (Question 65 repeated) and in your answer consider the Wicke machine as it is, and not as it might be.

(Objected to on the ground that the witness has not regarded in his testimony anything but facts.

The attention of complainant's counsel is called to the answer.)

A. I assume that the position in which the machine is placed is immaterial. If it be worked in a vertical position, very good results would follow. If it be inclined somewhat, the same results will follow, with the exception that it will be necessary to modify some of the working parts, such as the treadle, and if brought entirely to the horizontal position the funnels for feeding the nails and the use of one-half of the spring jaws or nail-guide becomes unnecessary. In this position I found the Wicke machine, in the shape of Ostrum's modification.

(Answer objected to as not responsive, and)

X Q. 67. Question repeated.

(Objected to as already answered.)

A. It would be necessary for me to first ascertain, if I had never seen one of these machines, to find out which position was considered the best, the horizontal or the vertical. I should then determine whether I would make the simple alteration in regard to the treadle and the one-half of the jaw, that the machine might be used in the horizontal position. My answer, therefore, to the question is that this alteration is necessary to produce the same result in regard to the effect produced by the inclination of the groove in the Ostrum machine. It therefore follows that, as the machine is constructed, this alteration must be made.

X Q. 68. Have you ever seen a Wicke machine made to work in a horizontal position?

(Objected to as already answered in answer to Q. 6.)

A. The only machine that I have seen covered by the Wicke patent working in a horizontal position is the Ostrum machine, seen in operation at 181 Lewis street, N. Y. City.

X Q. 69. Were the grooves in the machine which you saw in Lewis street arranged at equal distances from each other or otherwise?

A. I did not measure them. They appeared to be at very nearly equal distances, as well as my memory serves me.

X Q. 70. Is it not a fact that some of the grooves in that machine were double the distance apart to others?

65 (Objected to as immaterial and very indefinite.)

A. There was some irregularity, I believe, in the relation which the grooves bore to each other.

X Q. 71. You stated in your direct examination that the machine you saw in Lewis street was such as is represented by the drawing in Exhibit 3. Now, in Exhibit 3 there is but one treadle shown. State

whether or not there was more than one treadle in the machine you saw.

(Objected to as immaterial.)

A. There may have been two treadles. Whether there was more than one would not have produced any impression on my mind, because one treadle is sufficient. It might have occupied the whole width of the framework, or it might have been divided up into several separate pieces. I saw the machine was operated by a treadle, and that was sufficient.

X Q. 72. Is it not a fact that that machine had two treadles, and that the use of both of those treadles was necessary to work the machine in the manner in which it was constructed?

(Objected to as immaterial and as already answered.)

A. I did not observe that it was.

X Q. 73. From the description of the operation of the cam in complainant's patent, which says that the cam may be turned in the direction of the arrow to that point where it may be turned more or less without depressing the gate, I would ask you to state whether or not the cam would not reach a dead point, so that the springs on the plungers would not operate to raise the gate.

(Counsel for complainant asks that the drawing be shown witness, which counsel for defendant refuses to do. Counsel now objects to the question as improper, as there is no arrow shown in the specification.)

A. As I do not find any arrow in the specification, I cannot answer the question.

X Q. 74. Look at the drawing shown you, and then state whether you can answer the question or not.

A. I can answer the question. As represented in the drawing, the cam would return to its normal position by the action of the spring on the plunger. I make this statement because I see that the rocker-arm situated on the cam-shaft, in connection with the connecting-rod and treadle, would prevent the assumption of any other position.

X Q. 75. Could the cam be turned to such a point that it could be turned more or less without depressing the gate?

A. Not through the aid of the treadle and connecting-rod, as shown in the drawing.

X Q. 76. What is there to prevent it?

A. The material of which the connecting rod is constructed.

X Q. 77. Is that the only thing which you find to prevent it?

A. There may be some inaccuracy, as the cam is shown in the patent-drawing. I find that by striking a line across the centre of the cam-shaft that there is slightly more stock than would fill the space in the gate, but as the connecting rod must prevent the cam from ever
66 coming to that position, this surplus of stock would not have any effect on the operation of the machine.

X Q. 78. Then I understand you to say that a machine constructed according to the drawing would not operate as described in the patent in that particular. Is that the case?

A. In what particular?

X Q. 79. With reference to the position to be attained by the cam?

(Objected as immaterial, and as the position of the cam is not part of the operation described.

Complainant's counsel is referred to the patent.)

A. The drawing shows distinctly that no position could be attained by the cam through pressing the treadle other than that which would

allow of the immediate return of the cam to its normal position upon releasing the pressure on the treadle.

(Question objected to as not responsive.)

X Q. 80. Is that the best answer you can make to the question?

A. The drawing shows, Exhibit 5 shows, the original machine shows, that the cam is constructed to bring the treadle back by the aid of the spring on the plunger, there being no state of rest, only that which occurs during the time that intervenes between the downward and upward motion of the treadle.

X Q. 81. Please look at Exhibit No. 5 as it now appears, and you will observe that I have placed my finger on the cam-shaft arm, and I have forced the cam in the direction indicated in the patent that it might be turned still farther in the same direction without producing any motion. Can the springs on the plungers now operate in the position in which you see the machine to raise the gate? Answer yes or no.

A. If the rocker-arm on the cam-shaft be disconnected from the treadle, the cam may be then brought to a position where it will stop, and have no up and down motion whatever. That position occurs at two points in the cam only, being the points where the periphery of the cam is situated furthest from the centre of the cam-shaft. I do not find any curve on this part of the cam corresponding with a circle drawn from cam shaft centre.

X Q. 82. From the latter part of your answer I understand you to say that there is not such a circular portion on the cam in Exhibit 5 as is shown and described in the patent. Is that the case?

(Objected to as assuming what the witness has not said.)

A. I have not made that assertion.

X Q. 83. Then explain what you do mean by that portion of your answer reading as follows: I do not find any curve in this part of the cam corresponding with a circle drawn from cam-shaft centre.

A. I mean that although there may be a slight curvature on the periphery of the cam, corresponding or concentric with the cam shaft centre. This would have the effect of diminishing the velocity of the gate rapidly as the plungers were depressed home. But I do not find in Exhibit 5 that such a curved portion of the cam could by depression of the treadle reach the position where such a curvature on the cam would naturally prevent its return to its normal condition.

67 X Q. 84. Then you mean to say, do you, that the circular portion of the cam shown in Exhibit 5 forms part of a circle described from the centre of the shaft?

A. It may happen that it is so, but it is hard to detect it in the model.

X Q. 85. Can you state whether or not that is the fact?

A. I cannot state whether it is so; the curvatures, as I said before, are so slight.

X Q. 86. What is your opinion in that regard?

(Objected to as immaterial.)

A. My opinion is that there may be a slight curvature described from the centre.

X Q. 87. You have stated in your direct examination that you had seen the first machine made under the Wicke patent. How do you know whether it was the first machine or not?

Adjourned to Thursday, the 9th of November, at 11 o'clock a. m.

THURSDAY, *November 9th*, 1876—11 o'clock a. m.

Pursuant to adjournment. Counsel present as before.

Answer to cross-question 87:

A. They were so stated to be by Mr. Wicke: he showed me two machines, but could not state positively which of the two was made first. I saw no difference in the construction of the two machines. I saw them at Mr. Wicke's factory.

X Q. 88. What is the shape of the groove in the spring jaws in the Wicke machine?

A. Approaching to a half circle, the diameter being somewhat larger at one end (the end at which the nail is inserted) than the other; I am not sure as to whether the groove has a positively circular form.

X Q. 89. Does the groove at the lower end show an opening in the spring jaw, or does it end in the solid metal in the machine you saw?

A. My conviction is that the groove continued slightly through the end of the jaw. On this point I am not sure.

X Q. 90. If the groove continued through the jaw, what would prevent the nail from dropping through the same, until the head of the nail would be caught at the upper end of the groove.

(Objected to as indefinite—absolutely incomprehensible.)

A. The grooves being sufficiently small, would prevent an occurrence of that kind. I mean by this that part of the jaw from which the nail issues.

X Q. 91. At what time, and on what machine were the nails driven, which are represented in Exhibit No. 7?

A. The nails in Exhibit No. 7 were driven by hand to illustrate the particular effect or result which would be produced by driving nails with the Wicke machine, using the spring jaws, and that produced by the Ostrum machine, by using such grooves as appear in that machine.

68 Redirect:

R. D. Q. 92. Have you an interest in the result of this suit, directly or indirectly?

(Objected to as immaterial.)

A. No interest whatever, only a natural interest common to all honest inventors.

R. D. Q. 93. Were you personally acquainted with the complainant prior to the time referred to by you in your testimony?

A. I never saw him before that time, nor have I seen him since I went up to inspect the machines.

R. D. Q. 94. Did you, in answer to X Q. 41, name all your inventions?

A. I did not. There are various other inventions, such as the special machinery used in the construction of the article which I manufacture and had manufactured. I have models also of inventions which I am not yet prepared to make public.

R. D. Q. 95. In your answer to Q 6 you say that you saw a nailing-machine, constructed in accordance with complainant's patent, in Lewis street. In your answer to Q. 46, you say the first actual machine you saw in operation was at Mr. Wicke's establishment; did you see the Lewis street machine after you saw that at Wicke's establishment, and if not, how are we to understand your answer to Q 46?

A. I meant by that answer to Q. 46 that I saw the first actual Wicke machine in operation at that time: I had previously seen the machine in Lewis street, represented as Ostrum's machine.

R. D. Q. 96. What did you mean by your answer to X Q. 55?

(Objected to as incompetent.)

A. I meant by that answer a natural falling, as occurs in the attraction of gravitation, and not the rising and falling or reciprocating motion as understood in mechanics.

R. D. Q. 97. State whether or not you did find in the Ostrum machine reciprocating plungers, such as described in the Wicke patent?

A. I did find reciprocating plungers. I understand the combination of plungers to be an exact equivalent to the plungers used in the Wicke machine.

(Last part of the answer objected to by defendant's counsel as volunteered and not as responsive, and as incompetent, the witness not being shown to be an expert.)

R. D. Q. 98. State whether or not your answer to Q. 57½ had reference to the adjustability of the Ostrum grooves with regard to their distance from each other or otherwise.

A. It had reference to the distance of the grooves from each other, and not to the possibility of moving the whole series.

R. D. Q. 99. In answer to X Q. 61½ you define a rock shaft as one that oscillates on its journals, and in answer to Q. 61 you say that Exhibit 6 has no rock shaft. Please state why the upper shaft shown in Exhibit 6 is not termed a rock shaft by you.

(Objected to as incompetent, the witness having expressly referred to Webster as his authority on that subject.)

69 A. It is impossible to produce a motion through the aid of a cam which does not make a complete revolution without employing a shaft which will rock in its journals. It therefore follows that if we employ a cam, we must also use a shaft, which will have a rocking motion, unless it be a continued or intermittent rotary motion. In my description of a rock shaft in that answer I stated that such a shaft would not be complete unless connected with the object to be moved by a suitable rod or shaft. The difference between the term rock shaft as understood in mechanics and the rock shaft intended to produce motion by a cam-shaped surface, I thus define: I mean that a rock shaft would not be complete without a suitably hinged connecting rod or shaft, by which the motion will be transmitted, thus avoiding the sliding motion which occurs during the movements of a cam in producing the rusultant motion.

R. D. Q. 100. By "curved," in answer 65, did you mean the transverse or the longitudinal form of the groove, or what?

A. I mean that the curve of the groove runs in the same direction as the curvature of the plunger, and corresponds somewhat to the centre or axis of said plunger.

R. D. Q. 101. Please describe the means employed by defendant's counsel for putting Exhibit 5 in the position indicated in X Q. 81, with special reference to the rod which connects the crank to the treadle.

(Objected to, as the question shows the means employed.)

A. In bringing the cam to this position, defendant's counsel distorted the connecting rod out of its natural position. Without doing this, he could not have brought the cam to such a position.

R. D. Q. 102. Now answer the last question, please, with special reference to the distance between the treadle and the crank, which I understand to be an unvarying distance during the operation of the machine.

A. As the distance between the two points at which the connecting rod is secured is unvarying, the connecting rod must be of sufficient length to fill that distance. Defendant's counsel, in bringing the cam to

the position referred to, shortened the distance between the crank and treadle-points, at which the connecting rod is secured, it therefore followed that the connecting rod was bent sufficiently out of its natural shape to allow it to accommodate itself to the unnatural position into which defendant's counsel brought the cam.

R. D Q. 103. If, as Q. 90 implies, the head of the nail would be caught at the upper end of the groove, would it be possible for the nail to drop through as suggested in that question?

A. It would not be possible.

R. D. Q. 104. As a matter of fact, are the nails or the grooved guides in the Wicke machine or the Ostrum machine longest?

A. The grooved guides are longer than the nails in each case.

R. D. Q. 105. Is this necessary?

A. Not absolutely so.

R. D. Q. 106. Is it desirable; and, if so, why?

A. It is desirable to have the grooves longer, because the true position of the nail being driven can be more accurately arrived at.

R. D. Q. 107. X Q. 90, describing, as you have stated, an impossibility, what did you understand it to mean when you answered it?

A. I understood from the question that the point of the nail would pass through the aperture of the grooves until the head came in contact with the upper portion of the grooves. The point of the nail in this position would therefore project beyond the end of the grooves before any motion was applied to the treadle of the machine for the purpose of driving the nail.

R. D. Q. 108. By referring to figure 1 of the drawing of complainant's patent, how do you find the boards of the box to be held, or clamped in position?

A. In the vertical and horizontal position.

R. D. Q. 109. By what means are they held so?

A. The boards are held in position by the table and the terminal points of the spring jaws.

Recross:

R. X Q. 110. In answer to Q. 98 you say, "I did find reciprocating plungers." Were they such plungers as described in the Wicke patent?

A. They were in as much as that they were made to move in the direction of the nail for driving it.

R. X Q. 111. Did they have any globe or disk-shaped collar, such as described in the Wicke patent?

A. No.

R. X Q. 112. Were they of such shape in any particular as those described in the Wicke patent?

A. Yes; they were flat at the ends which come in contact with the heads of the nails. They were placed parallel with each other also, and they were also in one continuous direction. I mean that a line drawn through the centres of the plungers in the Wicke patent would represent a line drawn through the centres of the plungers in the Ostrum machine, thus showing that they were not only parallel with each other, but constructed on the same plane.

(All after the word "nails" objected to by defendant's counsel as not responsive.)

R. X 113. Is there more than one kind of a rock-shaft known in mechanics?

(Objected to as not pertinent to any issue in this case.)

A. Almost any shaft which has a rocking motion may be called a rock-shaft.

R. X 114. Is the device shown in Exhibit No. 6 for imparting motion to the plunger arrangement, as you have termed it, a rock-shaft?

(Objected as not in issue in this case.)

A. It is not strictly a rock-shaft but a cam-shaft. It is true the term is much used for such pieces of mechanism in marine engines, etc., but as it has the cam, which, in imparting motion, must be attended by the sliding motion upon the surface of whatever it comes in contact with, it must necessarily be termed a cam-shaft, although many mechanics call it a rock-shaft.

R. X 115. Would the result which you have described in your answer to question 107 be the case if the grooves in the spring jaws were shorter than the nails?

71 (Objected to as argumentative.)

A. Not necessarily in all cases, but in many cases it would be so.

R. X 116. How would it be with regard to the Wicke machine as the grooves are made, provided the grooves were shorter than the nails?

(Objected to as already answered, as far as the facts go; beyond that objected to as argumentative.)

A. It would depend upon the size of the nails used. If they were very small, and the grooves were not constructed to accommodate such nails, without regard to the length of the jaws, then small nails might drop through entirely. But if the grooves terminated in a very fine aperature, they would then prevent the nails falling through. It follows, therefore, that by constructing the jaws to guide the nail by grooves having a small aperture at the one end, and larger at the other, the best attainable results will follow. I mean to say that this relates to those jaws which are shorter than the nail.

R. X 117. You have said that the spring jaws had an aperture at their lower end made by the grooves; state, if possible, how large that aperture was.

(Complainant's counsel denies that the witness said so, and calls for citation of the answer referred to, and objects to the question as not re-cross-examination.

Question withdrawn.)

R. X 118. Do you find in complainant's patent any means for clamping the boards to be nailed?

A. I do.

R. X 119. What means?

A. An adjustable table which clamps the boards—by the aid of a screw, situated beneath the table—between itself and the terminal points of the spring jaws or grooves.

R. X 120. Have you seen a Wicke machine operated in the manner you have described, so as to clamp the boards?

(Objected to as immaterial.)

A. I do not remember to have seen the actual operation of this available method represented in Wicke's patent drawing, nor do I think it absolutely necessary, as the boards may be held in position by the operator without the aid of the adjusting screw beneath the table. It will thus be seen that the work may be either clamped between the grooved jaws and the table, or simply held in position by the operator.

Re-redirect:

R. R. D. 121. Do you find the figure 1 of complainant's patent drawing to indicate the proportion of the nail and jaw?

A. I find the small part of the groove and the large part of the groove bear such relation to each other in regard to difference in size, that they will hold nails of various sizes, having large range from
72 small to large, within, of course, certain limits. I see a nail in the drawing which appears to correspond with the shape of the jaws.

R. R. D. 122. Please state how the means for clamping the board against the grooved guides, as illustrated in Exhibit No. 4, and in the Lewis street machine differs substantially from, or are similar to, the means shown in the drawing of complainant's patent for clamping the boards against the grooved guides.

A. In Exhibit 4 I find two screws for advancing the table or cross-bar, for clamping the boards, the same as in Exhibit 5, with the exception that two screws are used in place of one in Exhibit 5. In the machine which I saw in Lewis street the cross-bar or table was made adjustable by the end of a screw pressing on a cam, so that when the shaft to which the cam is connected were put in motion the cross-bar or table would be advanced upon the work to clamp it. The Lewis street machine has the cross-bar or table shown in Exhibit 5, but differs in that that table is advanced, or clamps the work by a cam situated beneath the table, and so connected with the treadle of the machine as to produce the required result. I found also that the work was clamped between the table or cross-bar and the ends of the grooves, as in Exhibit 5.

THOMAS R. ALMOND.

Sworn to before me this November 9th, 1876.

JOHN A. SHIELDS,
Examiner, &c.

Complainant rests.

United States circuit court, southern district of New York. In equity.

WILLIAM WICKE
vs.
HENRY P. OSTRUM.

SOUTHERN DISTRICT OF NEW YORK, *ss:*

I, John A. Shields, a standing examiner, duly appointed by the circuit court of the United States for the southern district of New York, do certify that the several witnesses named in the annexed depositions appeared before me on the days therein specified, who, being by me duly sworn, gave said testimony, which was reduced to writing by a clerk appointed by me for that purpose, and in their presence, and they subscribed the same.

I further certify that A. Von Briesen, esq., counsel for complainant, and N. A. Calkins, esq., counsel for defendant, appeared on said examination.

Nov. 25, 1876.

JOHN A. SHIELDS,
Examiner, &c.

73 (Endorsed:) U. S. circuit court, S. D. of N. Y. William Wicke vs. H. P. Ostrum. Testimony on part of the complainant. Filed Nov. 25, 1876.

74 U. S. circuit court, southern district of New York. Second circuit.
In equity.

WILLIAM WICKE
vs.
HENRY P. OSTRUM.

SIR: You will please to take notice that the defendant herein will, on the seventh day of September, 1876, at two o'clock in the afternoon of that day, examine the following witnesses, and reduce such examination to writing, according to the usages and practice of this court, for the purpose of reading the same on the trial and final hearing of this cause, viz, William W. Hyde, Joseph B. Sargent, George Terry, Jarvis E. Kelsey and George Kelsey. That the examination will be taken before Johnson T. Platt, a commissioner of the United States, at his office No. 179 Church street, in the city and county of New Haven, and State of Connecticut. Also, that I will there introduce in evidence, for the purpose aforesaid, the letters patent, or a certified copy thereof, granted to Charles Atwood and George Kellogg, dated November 12th, 1850,
75 No. 7768, and that by such witnesses I propose to prove the special matter set forth in my notice, a copy of which was served upon you August 31st, 1876.

Dated New York, Sept. 1st, 1876.

Yours, &c.,

N. A. CALKINS,
Sol. and of Counsel for Def't.

To A. V. BREISEN, Esq.,
Sol., &c., of Complainant.

Service admitted this 6th day of September, 1876, under protest as to the competency of the proposed proceeding.

A. V. BREISEN.

Marked Defendant's Exhibit No. B.
Sept. 7, '76.

J. T. PLATT,
U. S. Commissioner.

UNITED STATES OF AMERICA,
District of Connecticut, ss:

Be it remembered, that on this seventh day of September, in the year of our Lord one thousand eight hundred and seventy-six, I, Johnson T. Platt, a United States commissioner, duly appointed by the circuit court of the United States for the district of Connecticut, in the second circuit, did call and cause to be, and personally appeared before me George R. Kelsey and William W. Hyde, to testify and the truth to say on the part and behalf of the defendant, in a certain suit or matter of controversy, now depending and undetermined in the circuit court of the United States for the southern district of New York, wherein William Wicke is complainant, and Henry P. Ostrum is defendant.

Present, Newton A. Calkins, esq., counsel for defendant, and F. V. Breisen, representing A. V. Breisen, esq., counsel for complainant.

(Counsel for complainant objects to the introduction of evidence and taking of testimony under the notice served on him yesterday, on
76 the ground that the same is incompetent under the pleadings, and gives notice that at the hearing he will move to have the same struck out and disregarded, because not noticed in the answer, and as otherwise incompetent.)

Counsel for defendant puts in evidence a notice served on complainant's counsel August 31st, 1876, marked defendant's Exhibit No. A.

(Objected to by counsel for complainant, as not competent evidence.)

Counsel for defendant also offers in evidence notice served on complainant's counsel September 6th, 1876, marked defendant's Exhibit No. B.

(Same objection.)

GEORGE R. KELSEY, a witness produced by and on behalf of the defendant, after being duly cautioned and sworn to interrogatories propounded by N. A. CALKINS, Esq., answered as follows:

(Counsel for complainant objects to the examination of this witness as incompetent under the pleadings, and gives notice that at the hearing he will move to have this testimony struck out and disregarded, because not noticed in the answer.)

Q. 1. What is your name, age, residence, and occupation?

A. Geo. R. Kelsey; age fifty five; residence, in the town of Orange, Connecticut; occupation, manufacturer.

Defendant's counsel now introduces in evidence certified copy of letters patent No. 38924, dated June 16th, 1863, issued to George Wicke, for machines for nailing boxes, marked "Defendant's Exhibit No. C."

Q. 2. I ask you to look at the drawing in Defendant's Exhibit No. 3, of this date and would call your attention to the cam C, and the
77 circular portion *e f* thereof, and in connection therewith would state that the function of said cam, as described in the letters patent, is as follows: to depress the plungers with the circular portion in such a manner that the plungers cannot be depressed any farther than is desired, and that the circular portion *e f* is described from the centre of shaft D; with that explanation please state whether you have ever seen a cam with a circular portion?

A. I understand from this question that the pressure is to be the same from *e* to *f*; I have seen cams giving a uniform pressure, as indicated by this cam from *e* to *f*.

Q. 3. Have you seen a cam with such a circular portion *e f* described from the centre of shaft D?

A. I have.

Q. 4. Where did you see it—what place?

A. At the factory of the West Haven Buckle Company, in the town of Orange, Connecticut.

Q. 5. How long ago did you first see it there?

A. Seventeen years ago.

Q. 6. On what kind of a machine?

A. For bending wire for buckles.

(Counsel for complainant objects to the foregoing testimony of this witness as incompetent under the pleadings, and refuses to cross-examine on that ground, and gives notice that at the hearing he will move to have his testimony struck out and disregarded and because not noticed in the answer.)

GEO. R. KELSEY.

WILLIAM W. HYDE, a witness produced by and on behalf of the defendant, after being duly cautioned and sworn to interrogatories propounded by N. A. CALKINS, esq., counsel for defendant answered as follows:

(Counsel for complainant objects to the examination of this witness

as incompetent under the pleadings, and gives notice that at the hearing he will move to have his testimony struck out and disregarded, because not noticed in the answer.)

78 Q. 1. What is your name, age, residence, and occupation?

A. William W. Hyde; age, forty-four; New Haven, Connecticut; occupation, foreman of New Haven Organ Company.

Q. 2. Are you familiar with machinery?

A. I am; I have been among it ever since I was nine years old.

Q. 3. Please look at the drawing in Defendant's Exhibit No. 3 of this date; I will call your attention to the cam C therein, and ask you if you have ever seen a cam with circular portions *e f* described from the centre of shaft D?

A. I have; I have seen it in a loom in Middletown, Connecticut, twenty-eight years ago, in the factory of the Russell Manufacturing Company; it was a webbing loom, for weaving girth webbing.

(Counsel for complainant objects to the foregoing testimony of this witness as incompetent under the pleadings, and refuses to cross-examine on that ground, and gives notice that at the hearing he will move to have this testimony struck out and disregarded, because not noticed in the answer.)

WM. W. HYDE.

Subscribed and sworn to before me this 7th day of September, A. D. 1876.

[L. S.] JOHNSON T. PLATT,
U. S. Commissioner, District of Connecticut.

79 Circuit court of the United States, southern district of New York, second circuit. In equity.

WILLIAM WICKE
vs.
HENRY P. OSTRUM.

SIR: Please to take notice that the defendant herein will proceed to examine witnesses for and on his own behalf, under the provisions of the 108th rule of this court, before Joseph M. Deuell, examiner of this court, at my office No. 24 Park Place, in the city of New York, on the twenty-fifth day of September, 1876, at eleven o'clock in the forenoon.

Yours, &c.,

N. A. CALKINS,
Sol. and of Counsel for Defendant.

To A. V. BREISEN, Esq.,
Sol. and of Counsel for Complainant.

80 United States circuit court, southern district of New York. In equity.

WILLIAM WICKE
vs.
HENRY P. OSTRUM.

Testimony taken on behalf of defendant, for a final hearing, under and pursuant to rule 108 of this court in equity as amended, before Joseph M. Deuell, esq., examiner, &c.

NEW YORK, *Sept. 25th*, 1876—11 a. m.

Present, N. A. Calkins, esq., of counsel for defendant, and A. Von Breisen, esq., of counsel for complainant.

(Complainant's counsel protests against this examination, on the

ground that it is not taken under the 108th rule, as noticed, and objects to the filing, introduction, and reference to the alleged amended answer, of which copy was served on him September 15th, 1876, as the same is utterly incompetent He further protests against the filing of proof before one J. T. Platt, who is not a standing examiner of this court, and further protests against the proposed examination of Mr. George Terry, on the ground that he has appeared and acted as counsel and attorney for defendant in this case.)

WILLIAM E. UPTEGROVE, a witness called on behalf of defendant, being duly sworn, testifies as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is William E. Uptegrove; age, 25 years; residence, New York City; and occupation, merchant.

Q. 2. Are you acquainted with the complainant, Mr. William Wicke?

A. I am.

81 Q. 3. What is the name of your firm, and where is your place of business?

A. My firm's name is Uptegrove & Gedney, and place of business 465 to 475 East 10th street, New York City.

Q. 4. State whether or not Mr. Wicke ever called at your place of business to see an Ostrum Nailing Machine, and whether you had such a machine in your office.

A. He did call, and we showed him such a machine.

Q. 5. Please look at "Complainant's Exhibit No. 3," and state whether that is a circular issued by your firm, whether it repreresents an Ostrum machine, and whether Mr. Wicke saw such a machine in your office as is represented by the drawing.

A. The circular is one issued by our firm, and represents an Ostrum Nailing Machine, but not such as was seen by Mr. Wicke at the time referred to.

WM. E. UPTEGROVE.

Subscribed and sworn to before me this 25th day of Sept., 1876.

J. M. DEUEL,
Examiner.

ALFRED W. GEDNEY, a witness called on behalf of defendant, being duly sworn, testifies as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Alfred W. Gedney; age, 27 years last May; residence, 67 Horatio street, New York City; and occupation, I am a member of the firm of Uptegrove & Gedney, 465 and 475 East 10th street, New York City.

Q. 2. Are you acquainted with the complainant, Mr. William Wicke?

A. Slightly; I know him when I see him.

82 Q. 3. State whether or not Mr. Wicke ever called at your place of business to see an Ostrum Nailing Machine, and whether you had such a machine in your office.

A. He called there, and he saw the machine.

Q. 4. Please look at "Complainant's Exhibit No. 3," and state whether that is a circular issued by your firm; whether it represents an Ostrum machine, and whether Mr. Wicke ever saw such a machine in your office as is represented by the drawing.

A. Exhibit No. 3 is a circular issued by our firm; it is a correct picture of an Ostrum machine we have had at our office, as far my knowl-

edge goes; Mr. Wicke has never seen a machine like the one in the cut at my office.

Q. 5. Were you present at the time that Mr. Wicke called and saw the machine?

A. Which machine do you refer to?

Q. 6. Any machine.

A. I was present on one occasion, and I think two, when Mr. Wicke was there examining a machine.

Cross-examined by Mr. VON BREISEN:

X Q. 7. Did you sell machines like the one in the cut, Exhibit 3, for Mr. Ostrum, the defendant?

(Objected to as irrelevant and immaterial, and not proper cross-examination.)

A. We did.

A. W. GEDNEY.

Subscribed and sworn before me this 25th day of Sept., 1876.

J. M. DEUEL,
Examiner.

83 HENRY P. OSTRUM, a witness called on his own behalf, being duly sworn, testifies as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Henry P. Ostrum; age, 62 years; residence, New Haven, Connecticut; and occupation, manufacturing cigar-boxes; I am the defendant in this action.

Q. 2. I will call your attention to letters patent No. 172579, dated January 25th, 1876, to Henry P. Ostrum, for improvement in machines for nailing boxes, and will ask you if you have ever manufactured any machines substantially such as described in said letters patent, or substantially such as represented by the model, Complainant's Exhibit No. 4.

A. I have.

Q. 3. About how many?

(Objected to as not in issue prior to a decree for an accounting.)

A. Two.

Cross-examined by Mr. VON BREISEN:

X Q. 4. About how many machines of the kind illustrated on Exhibit 3 have you made?

(Objected to, as it does not appear the machines illustrated by Exhibit No. 3 are in controversy, therefore irrelevant, incompetent, improper, and immaterial.)

To which complainant's counsel replies that all infringing machines made by defendant are here in controversy.

A. I don't think I am prepared to say how many I have made of them.

84 X Q. 5. About how many, Mr. Ostrum?

A. Well, from ten to thirteen.

X Q. 6. Did you cause these circulars to be printed?

A. I did not.

X Q. 7. Who did, and when first were they printed?

A. Uptegrove and Gedney caused them to be printed, as it appears by the date on the circular, March 18, 1876.

X Q. 8. Are Uptegrove and Gedney your agents in this city?

A. They are.

H. P. OSTRUM.

Subscribed and sworn to before me this 25th day of Sept., 1876.
J. M. DEUEL,
Examiner.

Defendant's counsel offers in evidence certified copy letters patent No. 172579, dated January 25, 1876, granted to Henry P. Ostrum, for improvement in a machine for nailing boxes, marked Defendant's Exhibit No. D, September 25, 1876, J. M. D., Ex'r.

Defendant's counsel also offers in evidence certified copy letters patent No. 7768, dated November 12, 1850, granted to Charles Atwood and George Kellogg, for machines for making jack chains, marked Defendant's Exhibit E, September 25, 1876, J. M. D., Ex'r.

(Counsel for complainant objects to the introduction of the last named patent in evidence, on the ground that the same is not mentioned in the answer, and also as the same is utterly immaterial and not in any way competent evidence, and gives notice that at the hearing he will move to have the same struck out and disregarded.)

85 GEORGE TERRY, a witness called on behalf of defendant, being duly sworn, testifies as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is George Terry; age, 60 years; residence, New Haven, Connecticut; and occupation, solicitor of patents.

(Examination of this witness objected to; first, because he is defendant's attorney; second, because his name is not mentioned in the answer.)

Q. 2. Are you a practical mechanic?

(Objected to as leading and without foundation.)

A. I am.

Q. 3. For how long a period of time have you been a practical mechanic?

A. Ever since I was a boy.

Q. 4. How long have you been in the patent business?

A. More or less for exceeding 30 years.

Q. 5. Have you ever been examined as an expert witness in patent causes before this?

(Same objection.)

A. My testimony has been taken in such cases.

Q. 6. Have you read the letters patent No. 38924, dated June 16th, 1863, granted to George Wicke for machine for nailing boxes, and, if so, do you understand the invention described and claimed therein?

A. I have read such patent, and I think I understand the invention described and claimed therein.

Q. 7. State whether you have ever seen in operation and
86 examined a machine for nailing boxes, made in accordance with said patent, to George Wicke, and if you understand the operation of the machine.

(Objected to as incompetent and leading, and to the allegation as to the patent under which the machine is said to be made as improper and without foundation.)

A. I have never seen a machine made in accordance with the letters patent to George Wicke; I called at the factory of William Wicke & Co., in Gorick street, in company with Mr. Ostrum, the defendant in this suit, and asked of Mr. William Wicke, the complainant in this case, to see the machines which his expert in this case stated were there in

operation; this request was premptorily denied; he stated that his patented machines were secret machines, and we should not be allowed to see them; I understand the invention as described in the patent, but I do not regard the machine described in the patent a practical nail-driving machine, for reasons which I will hereinafter more fully state.

(Answer objected to as not responsive the question, and the promise of the latter part of the answer is further objected to as showing a corrupt understanding of the questions hereinafter to be asked this witness.)

Q. 8. What is the invention described in said letters patent and claimed therein?

(Objected to, as the patent speaks for itself.)

A. In the first paragraph of the patent I find the following sentence: "I, George Wicke, of the city, county, and State New York, have in-
87 vented a new and improved machine for making boxes; in view of the fact that the patentee invented no new result, but only new means of accomplishing an old result, this statement is right enough, and I pass to the statement of invention. I find recited in the statement of invention five particular inventions, which are mentioned in the following order: "first, the invention consists in the employment of grooved spring jaws, for the purpose of holding the nails, and to guide them to their proper places;" the invention mentioned in this part of the statement of invention is embraced in the first claim; second, "and it consists further in combining with said spring jaws a corresponding number of rising and falling plungers, for the purpose of driving each nail singly, and all at the same time;" the combination mentioned in this part of the statement of invention is embraced in the second claim; third, "also in arranging said plungers with globe or disk shaped collars, in such a manner that they spread the grooved spring jaws at the proper moment, and allow the heads of the nails to pass;" I understand the patentee by the word "arranging" to mean making, and that he means to say that his plungers are made with globe or disk shaped collars; the invention in this part of the statement of invention is embraced in the third claim; fourth, "also in arranging the cam that serves to depress the plunger with a circular portion, in such a manner that the plunger cannot be depressed any further than necessary to drive the nails;" by the word arranging I understand the patentee to mean making, and that he means to say that the invention consists in making the cam with a circular portion; the invention in this part of the statement of invention is embraced in the fourth claim; fifth, "in the general arrangement and combination of all the parts, so that the plungers and jaws, as well as the table that supports the boards, can be adjusted according to different sizes of boxes to be made;" by all the parts I understand the patentee to mean only those parts by which the adjustment of the machine to boxes of different sizes is ef-
88 fected; the invention in this part of the statement of invention is embraced in the fifth claim; to recapitulate, I find three elements mentioned as new inventions, and these are found in the first, third, and fourth claims; I also find two combinations mentioned as new inventions, and these are found in the second and fifth claims; turning from the statement of invention to the descriptive part of the specification, I would remark that this patent abounds in vague and indefinite expressions, and that the description of the elements, and the description of the operation of the elements, are mixed together, and are very imperfect; the first claim is as follows: first, the employment of the grooved spring jaws H, substantially as described, for the purpose of receiving the nails, and to guide them to their proper places;

of this claim I would remark in the first place, that in terms it is for the employment of the grooved spring jaws H, which is not patentable; doubtless the court will construe it to be a claim for the jaws themselves; thus construed it would seem to be a valid claim, if the jaws have been sufficiently described.

(Objected to by counsel for complainant, as an improper attempt to give judicial construction to the complainant's patent.)

WITNESS continues: But there is little or no description of the grooved spring jaws in the specification; the patentee, however, says in the specification as follows: "When depressed the plunger enters the spring jaws H, which are screwed to the sides of the carriage F; the jaws are provided with grooves j, to receive the nails (see fig. 1), and they are so formed that when the plunger descends the disk-shaped collar *i* spreads the same, allowing the head of the nail to pass freely through the groove j;" in the way of descrptiion of the jaws, the above is all we find, and we learn from it that the jaws have grooves, and that the jaws will open. We learn from the drawing that the upper ends of the jaws are each connected by a curved spring to the carriage F, although very
89 imperfectly described, yet as the name grooved spring jaws is very appropriate and very suggestive, I am of the opinion that a skilled mechanic would be able to make them from the drawing and description, and that the public can avail themselves of the invention on the expiration of the patent, if they have any use for the grooved spring jaws.

(Complainant's counsel objects as volunteered, and not embraced in the question.)

WITNESS continues: The last words in this claim, "to guide them to their proper places," is repugnant to what there is of description; to allow the head of the nail to pass freely through the groove j, is surely not to guide the nail. From the very nature of their construction, the jaws being held together by a spring, they cannot guide the nail, nor is any guiding of the nail by the jaws necessary to the successful operation of the machine; the whole function of the jaws is to hold the nail in a vertical position over the point in the boards where it is to be driven, to open and let the nail freely pass as the plunger descends, and the invention in the spring jaws consists in their adaptation to thus hold the nail, and thus open and let the nail freely pass; when this adaptation is omitted and gone, the invention patented is also omitted and gone. The second claim is as follows: "Second, the combination with the spring jaws H, of the rising and falling plunger E, constructed and operating substantially as and for the purpose described;" of this claim I would remark that the words "rising" and "falling" seem to have greatly misled the patentee; he seems to imagine that the words rising and falling make the plunger E a self-moving and self-acting element, a kind of perpetual motion; they do not have that effect; the grooved spring jaws H and plunger E by themselves produce no effect, do not form a legitimate combination. To make the spring jaws H and plunger E opera-
90 tive in a combination, the combination must also embrace the gate B, the shaft D, provided with a cam C and arm *b*, rod *c*, and treadle *el*. The effect of the combination of these elements is to drive the nails; the spring jaws H and plunger E by themselves drive nothing and effect nothing. They do not form a patentable combination.

It is proper to remark here that when the nail is driven by the co-operative action of all the above mentioned elements, brought into play by the pressure of the foot on the treadle, there is still another contrivance, another invention needed in addition to any that has been shown

and described in this patent, to make this machine a practical nail-driving machine. Some means must be employed to bring back the cam C and the other elements of the combination, to a position in which they will drive another nail. For want of some contrivance for this purpose, the patentee has not shown and described in his patent a practical nail-driving machine.

The third claim is as follows:

"Third. Arranging the plunger E with a disk shaped collar, *i*, or its equivalents, to operate in combination with the spring jaws H, substantially as, and for the purpose specified."

This claim is functional in terms; it is a claim for doing a thing, and not a claim for the means by which a thing is done, by which a function is performed. Put in proper shape it would read as follows: Third. The plunger E, provided with a collar, *i*, as and for the purpose set forth. Thus amended it would seem to be a valid claim.

The fourth claim is as follows:

"Fourth. The arrangement of the circular portion *e f*, on the cam C, to operate in combination with the gate B and treadle *d*, substantially as and for the purpose set forth."

In the statement of invention the patentee, in speaking of making the plunger E with a disk shaped collar, uses the word arranging; and in the claim for the plunger, the third claim, he also uses the word

91 arranging; so also in his statement of invention, in speaking of making the cam with a circular portion he uses the word arranging. In all these cases I understand the patentee by the word "arranging" to mean making. In this claim the patentee has dropped the participle arranging, and substituted therefor the noun arrangement. To construe this claim consistently with the statement of invention and other parts of the specification, I must understand the word arrangement to mean making; that is, the making of the circular portion *e f* on the cam C. This claim, then, is functional in its terms: doubtless the court will construe it be a claim for the cam itself. Of the five badly drawn claims in this patent, this is the worst in the lot. By a person unskilled in patents and not knowing the difference between a claim for a specific thing and a claim for a combination of things or elements this claim might be mistaken for a claim for a combination. In proof that it might be so mistaken it is amusing to read in the testimony of the expert for the complainant that he finds in Exhibit No. 4, the mechanical equivalent of the combination of this fourth claim. Had he studied the statement of invention, his statement would not have been at variance therewith; and had he studied the fourth claim he would have learned that it, the fourth claim, as well as the second claim, does not embrace the requisite elements to form a patentable combination. This fourth claim put in proper shape would read as follows: Fourth. The cam C made or provided with a circular portion, *e f*, as and for the purpose set forth. This claim sets forth no novelty, no new invention; a cam with a circular portion being about as old as mechanic arts. I have made such cams years before the date of this patent.

(Objected to as incompetent, the witness' name not being in the answer; and as volunteer, as the question does not call on him for statements of prior knowledge.)

92 WITNESS continues: There was no special adaptation of the cam to this machine and none claimed. The centre of the circular portion being the centre of the hole through which the shaft passes, it is the same old cam, performing the same old function, in the same old

way, and producing the same old result, namely, holding an element in a machine stationary, or in one and the same position, while its own motion is continued. Such cams are sometimes called time cams.

The fifth claim is as follows:

"Fifth. The arrangement and combination of one or more adjustable carriages F, table J, and slide L, constructed and operating in the manner and for the purpose substantially as specified."

Of this claim I would remark that as all the elements in this pretended combination are adjustable, and sustain no fixed relation to each other or to the machine, their arrangement cannot form their subject of a claim, as there is no particular, definite, and fixed arrangement of the elements, to be pointed out and claimed. In a statement of invention in relation to the subject matter of this claim, the patentee says: "In the general arrangement and combination of all the parts by which the machine is adjusted to boxes of different sizes." But let us look at the adjustment of this machine for a minute. I find if the machine is adjusted to a box whose length is five inches and whose sides are three inches that all that is required to be done to adjust it to a box ten inches in length, whose sides are the same, or three inches, that is, to a box twice the length and double the capacity, is to move the carriage F; the sides of the boxes remaining the same, the adjustment of the machine to boxes of different lengths is made by the carriage F. The carriage in making this adjustment is unaided, uninfluenced, and unmodified, by the action of the table J or slide L; this I will call the first result, or the result produced by the adjustable carriage F. If as before the machine is adjusted to a box whose length is five inches, and whose sides
93 are three inches, then all that is required to be done to adjust the machine to a box, whose length is five inches, and whose sides are four inches, is to lower the table J one inch, and the adjustment is made. The adjustment then to boxes whose lengths are the same, but whose sides are different, is made by the table J. In making this adjustment of the machine to a box whose sides are four inchens instead of three inches, the table J was unaided, uninfluenced, and its action unmodified by either the carriage F or slide L. This I will call the second result, or the result produced by the adjustable table J. The old and well-known elements, the slide L, more commonly called a gauge, performs its accustomed function, in its accustomed way, in this machine; it holds the the ends of the boards even, and determines the distance the nails shall be driven from the ends of the boards. In performing these functions it is in no way assisted, influenced, or its action in any way modified by the carriage F or the table J. This I will call the third result or the result produced by the slide L. In adjusting this machine to boxes of different size each of these three elements performs its own peculiar function in its own peculiar way, without assistance from the other, and in no way modifies their action; they do not co operate in any way whatever. The adjustment of the machine, then, to boxes of different size is an aggregate result, or an aggregation of results, and this pretended combination is for an aggregation of results, is not a unitary result, and is not a patentable combination.

To recapitulate: I find the first and third claims valid claims; the fourth is for an old element in use, and performing the same function in a variety of machines years before this patent. The second and fifth claims are not for patentable combinations. I ought to remark her that as no machine or model of the machine patented to George Wicke June 16th, 1863, has been furnished or put in evidence——

94 (Complainant's counsel requests witness to look at the model of complainant's patent in the United States Patent Office.)

——I have thus been compelled to examine this patent, and learn what the invention described and claimed therein is: what the patent is for, and thus to trespass upon the province of the court, as it were, before I could enter upon a comparison of the differences between the invention and Exhibit No. 4, a model of a machine, which, it is claimed, infringes the invention.

Adjourned to September 26th, 1876, at 11 a. m.

NEW YORK, *September 26th*, 1876—11 a. m.

Present, counsel as before and the witness GEORGE TERRY for further examination.

A. to question 8 continued. Since my examination yesterday I have tried to find a machine made in accordance with the letters patent granted to George Wicke June 16th, 1863. I have found a machine this morning at the Metropolitan Box Factory, 98 and 100 Norfolk street, in this city, stamped with the date of this patent, June 16th, 1863, and with the word patented. This machine did not contain a single element I claimed in this patent. Another device was substituted for the grooved spring jaws; the plunger used on this machine had no collar to spread the jaws, and the cam with the circular portion was not found in this machine. I derived no aid, then, from this machine, and am still confined to the patent exhibited by the complainant in evidence with which to compare Exhibit No. 4 and ascertain their identity.

(Answer objected to as not responsive.)

95 Q. 9. Have you read United States letters patent No. 172579, dated January 25th, 1876, granted to Henry P. Ostrum, for improvement in machines for nailing boxes, and do you understand the invention described and claimed therein?

A. I have read said letters patent, and understand the invention described therein.

Q. 10. Have you ever seen a machine made substantially in accordance with said letters patent No. 172579, and do you understand the operation of the same?

A. I have seen a machine made substantially in accordance with said letters patent, and understand the operation of the same.

Q. 11. What is the invention described in said letters patent No. 172579, and claimed therein, and in your statement of the same take into consideration the invention described and claimed in letters patent No. 38924; also take into consideration the model, Complainant's Exhibit No. 4, and state wherein such model embraces any of the devices or matter of invention set forth and claimed in letters patent 38924, or in what respect the same differs therefrom?

Question withdrawn.

Q. 12. Have you read the testimony of Mr. A. Faber der Faus, an expert witness examined by and on behalf of the complainant in this action, June 6th, 1876, and do you understand the same?

A. I have read his testimony, but it is not very intelligible in some respects.

Q. 13. Question No. 11 repeated.

A. The invention described in said letters patent No. 172579 is a box-nailing machine in which there are several newly-constructed elements, which I will describe in connection with the elements in the

patent to George Wicke June 16th, 1863, and with the Complainant's Exhibit No. 4. The patentee, Mr. Wicke, shows in his patent
96 grooved spring jaws, for holding a nail in a vertical position, which are forced open to let the nail freely pass, as the plunger with its enlargement of collar descends. Mr. Ostrum shows in his patent the dies for holding the nail, having slots for receiving it in a horizontal position.

These elements are constructed wholly unlike the grooved spring jaws shown and described in the patent to Wicke, and will not perform the same function or the function that is performed by the grooved spring jaws in Wicke's patent. The invention in the jaws in the patent to Wicke consists in the adaptation of the grooved spring jaws to hold the nail in a vertical position, to open and let the nail freely pass, and when this adaptation is omitted and gone, the invention patented is also omitted and gone. The dies *m m m* in Ostrum's patent, in the absence of any proof to the contrary, were an unknown element at the date of the patent to George Wicke, in my judgment. These dies are not adapted to be forced open to let the nail pass, and no such function is performed in the machine patented by Mr. Ostrum, and none required. The plunger or hammer in the machine patented to George Wicke is provided with an enlargement, or collar, for the purpose of spreading the jaws; in the machine patented to Mr. Ostrum the plunger has no such enlargement or collar, and none is required. In the machine patented to Mr. Wicke there is a carriage, F, carrying the plunger E and the grooved spring jaws; in the patent to Mr. Ostrum there is no such carriage F, nor any element corresponding therewith, carrying any element of any kind. In Mr. Ostrum's patent the dies are held in their place by the hammers, and the hammers are adjusted in an element of the machine indicated by the letter *a*. In the patent to Mr. Wicke the adjustment of the machine to boxes of different sizes is effected by means of the elements carriage F, table J, and slide L, each acting separately and by itself, and in no way connected with the others; in the patent to Mr. Ostrum the machine is adjusted to boxes of different size, simply by mov-
97 ing the rest B. The rest B in the patent to Mr. Ostrum performs a function not performed in the machine patented to Mr. Wicke, in that it may be screwed against the work to be nailed, clamping the work between the rest B and the dies *m m*. I do not find a single element or device shown in the patent to Henry P. Ostrum dated January 25th, 1876, that in any way conflicts with any element or device shown and claimed in the patent to George Wicke dated June 16th, 1863. To be more particular, the dies *m m* will not perform the functions of the grooved spring jaws shown and claimed in the patent to George Wicke, and they are in no sense a mechanical equivalent of these jaws, in my judgment. In the absence of any proof to the contrary, they were unknown elements at the date of the Wicke patent. The plungers or hammers, as Mr. Ostrum calls them, *m m m*, have no enlargements or collars, which is the thing claimed in the plungers in Wicke's patent. In the patent to Mr. Ostrum there is no cam with a circular portion, which is claimed in Mr. Wicke's patent; nor is there any element performing the same function in the same way, and none needed. In granting this patent to Mr. Ostrum, the Commissioner of Patents made no reference to the patent of George Wicke, and in no way, in my judgment, trespassed on the rights secured to George Wicke by the grant of letters patent dated June 16th, 1863. I will say, in addition, that the second claim in the patent to George Wicke is not a claim for a patentable combination. I will also say that the fifth claim in the patent

to George Wicke is a claim for a combination of aggregate results, or an aggregation of results, and is not a claim for a patentable combination.

Q. 14. Have you examined letters patent No. 7768, dated November 12th, 1850, granted Charles Atwood and George Kellogg, for a machine for making jack chains, and do you understand the construction, operation, and functions of cam D, as shown in figure 2?

98 A. I have looked at said patent, but do not pretend to understand the machine in all its parts, and have looked at it solely to ascertain whether it contained a cam with a circular portion performing the same functions substantially as the cam claimed in the fourth claim of the patent to George Wicke, and find that it does perform substantially the same function, and is substantially the same element.

(Question and answer objected to by complainant's counsel as incompetent.)

Q. 15. Do you find any guides described and claimed in complainant's patent?

(Objected to as leading.)

A. I do not find any guides described and claimed in the patent to Mr. Wicke, but tubes are shown in the drawing, having an enlarged end, into which the nails are dropped, and the tube guides the nails into the grooved spring jaws. This tube is the only element in this machine which can with any propriety be called a guide, or which in any way guides the nails.

Q. 16. What constitutes a mechanical equivalent?

A. The substitution of an element or device in a machine for another, from one's knowledge of the art, and without the exercise of invention, or, as we sometimes say, it is an element performing the same function in substantially the same way.

Cross-examined by Mr. VON BREISEN:

X Q. 17. Are you the attorney for the defendant?

A. I am not; but I would state, in addition, that I took out the patent for Mr. Ostrum dated January 25th, 1876, and that I am now acting as solicitor for Mr. Ostrum, in an application for a patent for a box

99 nailing machine, several of the claims in which have already been allowed, and an appeal has been taken on one of the claims to the Commissioner of Patents. In no other way am I acting as an attorney or solicitor for Mr. Ostrum.

X Q. 18. Did you write the letter, Exhibit No. 6, now shown you, with your own hand, and did you send it to me?

A. I did.

X Q. 19. Did you write it in your capacity as expert?

A. As expert in what case?

X Q. 20. In what cases did you testify as expert? Mr. Terry, please enumerate each and every of them, stating in what court, if any, they were pending.

A. It is somewhat difficult to answer that question definitely, but I have testified as expert in very few cases. There was a gentleman in Taunton, Massachusetts, whose name I do not recollect, brought a suit against H. K. Sears and a gentleman of the name of Work, for an infringement of an odometer, in 1858 or 1859. My testimony was taken; whether it was ever used to return to court is more than I know. My business, in addition to soliciting patents, is in giving written opinions as to whether one patent conflicts with another, and in examining machines, models, and drawings, and I have advertised to do this business for years, and it is an every-day business with me.

(The latter part of answer objected to as not responsive, and the officer is requested to order the witness to confine his answer to answering the questions.

The foregoing is read to witness.)

X Q. 21. Are you admitted to practice in the courts of the United States; if so, in which?

(Objected to as immaterial.)

A. I am not.

100 X Q. 22. By what right do you call yourself counsellor in patent cases in Exhibit No. 6?

(Objected to as incompetent and immaterial.)

A. The same right that any American citizen has to give counsel in any case he sees fit.

X Q. 23. Do you not know that by the use of that term you give an implied assurance that you are an admitted counsellor at the bar of the court, and that as such, your opinion as regards the validity of claims, the question of infringements, and the like, is to receive consideration and respect?

(Same ob ection.)

A. I very well know that there is no bar before the Patent Office; that every person of good moral character practices before the Patent Office, and acts as counsellor to parties having applications before the office.

(Answer objected to as not responsive, and

X Q. 24. Question repeated.)

A. I do not know that any such construction is to be put upon it, and such a construction is at variance with the every-day practice before the Patent Office.

X Q. 25. Did you write Exhibit 6 to me with a view that you were practicing before the Patent Office in so writing?

A. I wrote that letter at the request of Mr. Ostrum, without having the Patent Office in view or the courts in view.

X Q. 26. In what capacity did you write that letter?

A. In my own individual capacity.

X Q. 27. Then, by the term "my agents, my machines, my business and property," you mean your own individual agents, machines, business and property, do you?

(Objected to as immaterial.)

101 A. This letter is signed Henry P. Ostrum, by George Terry, counsellor in patent cases.

X Q. 28. How came you to sign that letter that way, and by whose authority?

(Same objection.)

A. It is an every-day matter with me to sign letters that way, and I don't need any authority for the purpose.

X Q. 29. Did you ever subscribe your name in any one of your communications, which you directed to the Commissioner of Patents, as counsellor in patent cases?

(Same objection.)

A. Ordinarily in addressing the Commissioner of Patents we sign ourselves as attorneys, but I think I have in some of my communications to the Commissioner of Patents signed myself as counsellor. In one case, which I now recollect, in a letter to Mr. Leggatt, Commissioner, I think I signed myself as counsellor, but am not quite certain; that letter did not relate to a case before the Patent Office.

X Q. 30. You say that you called on Mr. Wicke to look at his machine,

and that he refused to show it to you. Did he not tell you he would show it to you if you brought an order from me requesting him to do so, or an order from the court?

A. Mr. Wicke said we might see the machine if we got an order from his attorney to that effect, but he said nothing about any order from the court, that I recollect. I stated to him that it was too late to get an order from his attorney, as the testimony was to be taken that day at 11 o'clock, and I told him that we had been given to understand by his attorney that we could see the machines whenever we were pleased to call, but he peremptorily refused to let us see the machines.

102 X Q. 31. Were you present at the examination of witnesses for the complainant in this cause; if so, in what capacity?

A. I was present at the examination of Mr. Wicke and Mr. Faber du Faus, and was requested to be present by Mr. Ostrum, in the expectation that I should be called on to testify as expert in the case.

X Q. 32. Why did you not before yesterday ask me for a permit to see the machine, and why did not you so ask me yesterday, and when did you understand me to have given you the promise that you could see the machine whenever you wanted?

A. I live some seventy-five miles distant from this city, and if we could have seen the machine for half an hour at any time before giving the testimony, it would have been all I desired. The reason is, that we lived some distance away, and there was no reason for coming here for that especial purpose, and from what I had learned I did not suppose any written order from the attorney was required. It was too late to ask Mr. Von Breisen yesterday for an order to see the machine before 11 o'clock; it was too late in the afternoon, for the testimony had commenced. I never had any information from Mr. Von Breisen that I could see the machine, but I was advised by Mr. Ostrum's attorney that Mr. Von Breisen had told him that we could see the machines whenever we were pleased to call. I should think that was some four or six weeks ago, after this case was commenced.

X Q. 33. Why did you prefer to look at machines in Norfolk street last night, rather than look at Mr. Wicke's machines?

A. I had no such preference; I would rather have seen the machines at Mr. Wicke's, though they were stamped as Mr. Wicke's patent. The reason why I preferred to look at the machines in Mr. Wicke's factory was because his expert in this case had testified that there was a machine there in operation made in accordance with the letters patent granted to George Wicke.

103 X Q. 34. Why did you go to Norfolk street, and not ask me for a permit and go to Goerck street?

A. The reason was because Mr. Ostrum and myself had come to the conclusion that both his attorney and Mr. Wicke were unwilling that we should visit Mr. Wicke's factory to see the machines, and Mr. Von Breisen very well knew yesterday that we had been there for that purpose, and had been refused a sight of the machines. Mr. Von Breisen knew it from my testimony.

X Q. 35. Why did you think that I wouldn't give you a permit?

A. The reason is because we had come to the conclusion that the machines in Wicke's factory were not made in accordance with his letters patent.

X Q. 36. Why did you come to that conclusion?

A. I had been advised that machines were in use stamped with the date of this patent, as patented, which, in my judgment, were not made

in accordance with the letters patent, and I have been shown circulars of such machines.

(Objected to as hearsay.)

X Q. 37. Then you formed your judgment of how the machines were made at Mr. Wicke's place without having seen them; is that the case?

A. I had been advised that machines were in use stamped with his patent that were not made in accordance with it, and I wished to visit his factory to see his machines, to see if they were made in accordance with it.

(Same objection.)

X Q. 38. Why did you think I would not give you a permit to see them?

104 A. Mr. Von Breisen learned from my testimony that I had been to the factory and been refused admittance, and he did not offer to give any permit, and I presumed he did not want us to see the machines from that fact.

X Q. 39. Is the machine that is shown in Exhibit No. 3 made substantially in accordance with Ostrum's patent of January 25th, 1876?

A. It is not: there is a wide difference between this machine and that of Ostrum's.

In view of the foregoing answer, which denies that the machine in Exhibit 3 is covered by Ostrum's patent, and in view of the admission of defendant's counsel, on May 17th, 1876, to the effect that the machine illustrated on circular Exhibit No. 3 is the machine in controversy, counsel for complainant objects to the conduct of the defence as in bad faith, and demands that defendant show the exact construction of the machine here in controversy.

(Counsel for defendant, with reference to the admission referred to, will here state that such admission was made before counsel for complainant had introduced any testimony showing what machine he had brought his suit against, and the admission was made under the supposition that the machine in controversy was the one represented by Exhibit No. 3, and complainant's counsel is notified that if his testimony does not show such to be the fact, he must abide the consequences.)

X Q. 40. Then it is a fraud on the public to stamp that circular patented January 25th, 1876, is it not?

(Objected to as calling for an improper conclusion.)

A. I would say in reply that the patent referred to was for the
105 construction and combination of all the elements, substantially as shown in the patent, and that I believe some of the elements in that patent are shown in that drawing, but I should like to examine it further before giving a definite answer.

X Q. 41. Do you know whether Mr. Ostrum has made during this year more than one kind of nailing machines, and if so, how many kinds did he make?

A. As attorney for Mr. Ostrum before the Patent Office, in applications for patents for these machines, I do not feel at liberty to answer the question.

In view of the foregoing answer counsel for complainant refuses to further cross-examine this witness, who covers himself with the cloak of an attorney whenever anxious to conceal facts which would injure his client.)

WITNESS continues: I do not know that Mr. Ostrum has made any nailing machines.

X Q. 42. In what respect does the machine of Exhibit 3 differ from the machine as described in Mr. Ostrum's patent?

language, every ordinary mechanic in this country could readily understand it?

A. It is my opinion that every person could understand it, with the exception of the expert which complainant has offered in this case, Mr. Faber der Faur.

X Q. 56. Did Mr. Faber der Faur testify at all as to the bearing of the words "proper place" in complainant's patent?

(Objected to on the ground that the testimony of Mr. Faber der Faur will speak for itself, and therefore incompetent.)

A. I will have to look and see.

Adjourned to September 27th, 1876, at 11 a. m.

110 NEW YORK, *September 27th* 1876—11 a. m.

Present, counsel as before, and the witness TERRY for further examination.

Cross-examination of GEORGE TERRY continued:

X Q. 57. Do you mean to say, as a mechanical expert, and under oath, that from the context you do not really understand what the patentee, George Wicke, means by the term "proper moment" in the following sentence: "And also in arranging said plungers with globe or disk shaped collars in such a manner that they spread the grooved spring jaws at the proper moment, and allow the heads of the nails to pass"?

A. I do not.

X Q. 58. Did you deem yourself under oath in giving your last answer?

A. I did.

X Q. 59. Do you mean to say, as a mechanical expert, and under oath, that you do not really understand what is meant by the words "any further than necessary," in the following sentence of complainant's patent: "Also in arranging the cam that serves to depress the plungers with a circular portion, in such a manner that the plungers cannot be depressed any further than necessary to drive the nails"?

A. I do not; but I look upon this expression, and some others, as very vague and indefinite, and as leaving us in the dark, and under the necessity of studying exactly what he means; in patents all such indefinite expressions should be studiously avoided, and the exact functions of the elements clearly stated; and no rule in the Patent Office is now more rigidly enforced upon attorneys practicing before it, and insisted upon, than avoiding such vague and indefinite expressions as are found in this patent to Mr. Wicke.

111 (All after the words "I do not" objected to as not responsive, and the witness is requested to keep his valuable experience in the Patent Office to himself, until about it.)

X Q. 60. Who do you mean by us in the foregoing answer?

A. The public; those skilled in the art.

X Q. 61. In what art?

A. The art of making machines for nailing boxes.

X Q. 62. What do you know about the art of making machines for nailing boxes?

(Objected to as indefinite and improper.)

A. I have some knowledge of machinery in general, and should be able to tell in an examination of a nailing machine whether or not it is a practical nailing machine, as I have already done in this case.

X Q. 63. You say you should be able, but are you able?

A. I think I am.

X Q. 64. And yet you don't understand how far the nails are to be driven by the Wicke machine, from the description in the patent, do you?

A. I do understand, though his expressions in his patent leave us almost as much in the dark as though he had not undertaken to describe the distance.

X Q. 65. In your answer to x-question 59 you say you do not understand how far the nails are to be driven, and in the last answer you say that you do: which of these answers is true?

A. I mean by my answer to x-question 59 that I do understand; I have never intended to intimate that in saying that Mr. Wicke's patent abounded in vague and indefinite expressions, that I did not understand it, but I did mean to intimate and say that his patent was not skillfully drawn, in my judgment.

112 X Q. 66. Do you mean by the terms vague and indefinite everything you understand?

(Question objected to as vague and indefinite.)

A. I mean by the terms vague and indefinite, in a patent, language that does not clearly describe the elements and functions of the machine.

X Q. 67. What more do you expect of a description in a patent than that you can thereby understand the invention described?

A. A patent may be so drawn that it may be understood and yet be very objectionable; and the Commissioner of Patents is constantly requiring of attorneys before the office that they set out their inventions more clearly and distinctly, and condemning their applications and claims as vague and indefinite.

(Answer objected to as not responsive.)

X Q. 68. That is your personal experience, is it?

A. That is my personal experience, and I frequently have applications for patents brought to me to prosecute before the Patent Office, which have been rejected or thrown out for that reason.

X Q. 69. You have testified that the complainant's patent, speaking of the jaws, describes nothing more than that the jaws are to receive the nails; is that really all you find described and claimed with reference to the functions of the jaws; and if not, why did you omit to testify about the guiding function described and claimed with reference to the jaws?

A. That question is too much mixed up to answer; in testifying in relation to the jaws, I looked upon the words "to guide them to
113 their proper places," in the claim, as repugnant to what there is of description of the grooved spring jaws, in that the description speaks of them as opening to let the nail freely pass.

X Q. 70. You mean that the term "to guide them to their proper places," in the claim, is repugnant to the term "to guide them to their proper place," in the description, do you not?

A. I mean to say that I look upon the words in the claim, "to guide them to their proper places," as repugnant, and contradictory to the words, "allowing the head of the nail to pass freely through the groove *j*."

X Q. 71. This last answer you deem an upright and straightforward answer, do you, to the question which I have put to you?

A. I will try and answer the question, and all other questions which are fairly put, and with a view to obtain my opinion in relation to Mr. Wicke's patent correctly; and I would say, in answer, that the words

"to the proper place" are in the statement of the invention, and not in the descriptive part of the specification; and that I look upon the words "to guide them to their proper places," in the claim, as repugnant to the words "allowing the head of the nail to pass freely through the groove *j*."

(Answer objected to as not responsive to the question.)

X Q. 72. Do you believe that a patent covers, besides the elements named in the claims, all elements that are equivalent thereto?

A. If I understand the question correctly, I would state that a patent covers nothing, creates no monopoly as to anything which is not claimed.

(Answer objected to as not responsive.)

114 X Q. 73. Question repeated, and a categorical answer demanded.

(Objected to as not proper cross-examination, and counsel for complainant is notified that he makes the witness his own.

Defendant's counsel is referred to his question 16.)

A. The question is so put that I do not get hold of the exact thing which I am to answer, but I will state that I believe that nothing is covered by the patent which is not claimed, and that mere reciting elements or describing them in the specification does not give the patentee a monopoly of those elements; and if this is not responsive to the question, I would request the attorney for the complainant to put his question in some other form and I will try and answer it.

X Q. 74. Do you mean to say that you are incapable of understanding X question 72?

A. What is X question 72? Read the question, please.

(Question 72 read to witness.)

WITNESS says: My answer is as follows: Upon taking the paper and reading the question that it appears to me somewhat different from what it did when it was hurriedly read to me. I believe that the elements claimed in a patent covers the mechanical equivalents of such elements as were known at the date of the patent as mechanical equivalents.

X Q. 75. Read your last answer and state whether that is the best answer you can give?

(Witness reads answer.)

115 A. I regard that as a very correct answer.)

X Q. 76. You swear, do you, that Wicke's patent shows no means for raising the plungers after driving the nails in, and that the machine which is there shown would not be operative; answer yes or no.

A. I answer that Wicke's patent shows a spiral spring for raising the plunger after it has been depressed, but that the plunger cannot be raised while its upper end is against the circular portion of the cam C, and that the drawing and description do not indicate any means by which the cam C, when it has been turned to drive a nail to bring it back to a position in which it will drive another nail, and for this reason I look upon Mr. Wicke's machine as not a practical nail-driving machine.

X Q. 77. Does the cam C of Wicke's machine bear directly on the plunger?

A. It does not, but bears, if I remember right, on the gate B.

(The words "if I remember right" objected to as an attempt to mislead the court, as the witness had the patent in his hands at the time of answering and was studying it.)

X Q. 78. Do you mean to say under oath that the person operating

the treadle, shown in Wicke's patent, would not be able to rotate continuously the shaft D, and the cam or cams mounted upon the same?

A. From the drawing and description I am of the opinion that he could not keep up a continued rotation of the cam C, and the reason which I assign for my opinion is that the cam C and arm *b*, as they are shown in this patent, would not admit of a continuous rotative movement of the cam C.

116 Redirect examination by Mr. CALKINS:

R. D. Q. 79. In your answer to X question 69 do you or do you not mean to say that there is a guiding device shown in the spring jaw H?

A. There is no guiding device shown in the spring jaw H, is what I mean to say.

Recross-examination by Mr. VON BREISEN:

R. X. Q. 80. Is it grooved?

(Objected to as indefinite, not showing what is referred to.)

A. The spring jaws are grooved.

GEORGE TERRY.

Subscribed and sworn to before me this 27th day of Sept., 1876.

J. M. DEUEL,
Examiner, &c.

Adjourned to October 6, 1876, at 11 o'clock a. m.

NEW YORK, *October* 6, 1876—11 a. m.

Present, counsel as before.

WILLIAM C. HICKS, a witness called on behalf of defendant, being duly sworn, testifies as follows:

Q. 1. What is your name, age, residence, and occupation?

117 A. My name is William C. Hicks; age, 47; residence, Summit, N. J.; occupation, civil and mechanical engineer; and my principal occupation is examining and comparing machinery, inventions, and patents for the purpose of acting as expert in connection with patent litigation.

Q. 2. How long have you been in such business? Has your testimony been taken before in patent causes as an expert; and if so, in what courts?

A. I have been an engineer for about thirty years, practically engaged about twenty-eight years. My testimony has been frequently taken to be used in the United States courts and State courts.

Q. 3. Have you read United States letters patent No. 38924, dated June 16, 1863, granted to George Wicke, for a machine for nailing boxes; and if so, do you understand the invention described and claimed therein?

A. I have read a copy of the patent referred to in the question, and think I do understand the invention described and claimed therein.

Q. 4. Have you ever seen in operation and examined a machine for nailing boxes, made in accordance with said patent to George Wicke? And if so, do you understand the operation of the machine?

A. I have seen a machine embodying the prominent characteristics of said patent, with some additions and modifications to the same, and I do understand the construction and mode of operation of said machine, which I saw yesterday in the factory of Mr. Wicke, No. 155 Goerck street, New York City.

Q. 5. What is the invention described in said letters patent, and claimed therein?

A. As I understand the invention described in this patent, it is for a certain machine for assisting an operator in driving nails into boxes, where the nails are inserted into jaws of a peculiar character, which jaws are so constructed as to hold the nail in a vertical position, in order
118 that it may be pushed out from between the two jaws and driven into the wood of the box by a peculiar shaped plunger, moving vertically up and down, the wood of the box resting upon a table, which resists the blow of the plunger and nail, and holds one side of the box in a horizontal position, the upper board being also located horizontally in one direction by a stop, and the plungers being driven downward by means of a gate, operated by a peculiar shaped cam, hung on a horizontal shaft, upon which there is also a lever connecting with a treadle-rod and treadle, by means of which the plungers may be compelled to fall and drive the nail, when the operator presses upon the treadle with his foot. The operator places one board of the box vertically under the centre of the jaws, against the back of the frame, which is vertical resting the edge of the board upon the table, and holding with his hands the horizontal piece of board which he wishes to nail to the vertical one, at one end, and resting the other end on the vertical board, to assist him in that operation of holding it horizontally; the specification says that the two boards are adjusted in the correct position by a slide, which is adjustable in a groove; this slide is marked L in the drawings, and is seen at the right-hand side of the upper board in figure 2 of the drawings; this furnishes a *guage* for the position of the upper board at least.

Now, the invention is described in five sections of claim; and the first section of claim describes, as I understand it, a pair, that is two, grooved spring jaws, H, constructed substantially as described, for the purpose of receiving the nails, and to guide them to their proper places. Now, in connection with the drawings, the description sufficiently sets forth, in my opinion, the peculiarities and characteristics of these grooved spring jaws; the groove is shown by lines in drawing, figure 1, as tapering from the top to the bottom, but ending at a point higher up in a vertical direction than the lower end of the jaws; the jaws in figure 1 are shown to come together tight, and as being held together by
119 the force of their springs, and when together forming a tapering or conical recess, into which the nail may be dropped point foremost, and stand vertically over the spot on the box where it is to be entered, and be driven vertically home to its seat by means of the plunger. I have said that these jaws were a pair of jaws, for the reason that one is utterly useless in the machine without the other, neither could either one alone, under any conditions, or in any position, perform the functions of the two; they are as much united and necessary to each other as the two blades of a pair of scissors, or the two jaws of a pair of pincers. To operate, the peculiarity of their grooves, described and shown, is necessary, and also it is necessary that they be spring jaws.

The next section or distinguishing feature of this invention I consider to be the peculiar mechanism described in the third claim of this patent, which I understand to be a plunger having a peculiar shaped disk or collar, to operate in combination with the jaws I have just been describing, and adapted to the peculiarities of those jaws for the purpose of forcing the nail through and out those jaws into the box to be nailed; the shape of the plunger proper is round, and about the size of the head of the nail. Above the round part of the plunger is a disk-shaped col-

lar, which is said to spread the jaws apart, to allow the head to pass out of the gripe of the jaws. These two elements, which I have enumerated, viz, the pair of jaws and the plunger, are in the second claim set forth and described in reference to their combination; as I understand it they are to be combined together, substantially as described in the patent, so as to produce the result due to their operating together, as organized in the machine set forth in the patent. That result, as I understand it, is the driving of a nail into a box, at a point directly under the point of the nail, when held in the jaws ready to be operated upon by the plunger; the jaws springing each way to the right and to the left an equal distance, and allowing the head of the nail to pass
120 down centrally with the jaws, until it is driven into the box, the shoulder on the plunger pressing the jaws still further apart, to release the head from the grasp of the jaws, and then as the plunger rises again, permitting the jaws to come back to their original central position again, ready to receive another nail. These plungers and jaws are attached to the same carriage, and move together bodily with the carriage, and the rising of the plunger is dependent upon a spring connected to the carriage, so that the combination of the plunger and the jaws may be shifted about on a slide G to any convenient position, or to any point where it is desirable to drive a nail.

The fourth section of the claim relates to an arrangement of the cam to operate in combination with the gate and the treadle, and consists in forming such cam with a circular portion, which, when it is put into a certain position in reference to the gate, it may move on its centre or bearing, without giving any more motion.

The fifth section of the claim, as I understand it, describes the arrangement and combination of one or more adjustable carriages, with a table and slide, the three being designated by the letters F, J, and L, constructed and operating in the manner and for the purpose substantially as specified. Now, taking these elements, and arranging them as specified, they don't operate at all; they may be constructed as described, but each would act on its own hook, without any possible combination into which the word operation, or mode of operation, could enter. But if I place in the carriage F the plungers and jaws which belong there, I would get a mechanism which would operate; therefore I think I ought to put them in. Whether all these parts co-operate with each other, in their adjustable characteristics, so as to produce a legal combination of the parts, I have some doubt, but that is not my province to decide. But I cannot see what difference it makes to the table and the stop L when a box is placed in connection with them, whether the plun-
121 gers have been adjusted or not adjusted, so long as the plungers with the jaws in the carriages can drive a nail into the box so held; the holding parts perform their functions without any reference whatever to the adjustability of the carriages, the number of them, or their location on the slide G. I have referred to this machine as one adapted to drive nails, that is, more than one nail at a time, for the description tells me so; but yet only one set of apparatus is shown in the drawing. There are some defects in the specification, and if the machine was constructed exactly as described and shown in the drawing, I do not think that an operator would gain much time in making boxes with this machine over driving them by hand; but I have not taken into consideration these defects, but have supplied in my own mind such means as would make the parts work together, to perform the duties required of them. I have not regarded the inartistic language of the claim, but have tried to understand the mechanism described, in order to give to

the mechanism its best effect, aided as much as possible by the description preceding the claims and the drawings.

Q. 6. Have you read United States letters patent No. 172579, dated January 25, 1876, granted Henry P. Ostrum for improvement in machines for nailing boxes, and do you understand the invention described and claimed therein?

A. I have read the patent referred to in the question, and think I do understand the invention referred to therein.

Q. 7. Have you examined the model, Complainant's Exhibit No. 4, which is made in accordance with said letters patent, and do you understand the operation of the same?

A. I have examined said model, and think I do understand it.

Q. 8. Have you read the testimony of Mr. A. Faber du Faur, an expert witness examined by and on behalf of the complainant in this cause on June 6, 1876, and do you understand the same?

122 A. I have read said testimony, and think I do understand it substantially.

Q. 9. What is the invention described in said letters patent No. 172579, and claimed therein, and in your statement of the same? Take into consideration the invention described and claimed in letters patent No. 38924, granted to George Wicke; also take into consideration the model Complainant's Exhibit No. 4, and state wherein such model embraces any of the devices or matter of invention set forth and claimed in letters patent No. 38924, to George Wicke, or in what respect the same differs therefrom.

A. I understand that the invention described in this Ostrum patent, No. 172579, is a nailing machine for nailing boxes, and the invention set forth in the claim is a combination of a frame, which constitutes the table or platform on which the box rests, a treadle, a rock shaft, a head, *a*, provided with one or more adjustable hammers, *n n*, one or more adjustable dies, *m m*, and the rest B, all the said parts constructed and combined substantially as set forth in the specification; the frame *a* is a horizontal table; the treadle D (not shown in the model Exhibit 4) is under this table, and is connected with the end of a lever, which is itself attached to a rock shaft, parallel with the table, and located at the extreme end of the frame, opposite the operator, when he stands with his foot on the treadle; from this rock shaft extend up vertically two short slotted arm levers, one upon the right end of the rock shaft, and the other upon the left end of the rock shaft; in these slots, which are vertical, two pins are inserted horizontally, and fixedly attached to two ears in the head *a*; as the head *a* is arranged to slide to and from the operator, these slotted arms communicate the motion of the foot of the operator to the head *a*, through the pins. The head *a* extends across the machine at the extreme end, and has a face the plane of which stands vertically and at right angles to the plane of the table;

123 this face is the face of a vertical flange of the head *a*, and is slotted in a horizontal direction, nearly its whole length, extending right and left, and this slot is also parallel with face of the table; in this slot the adjustable hammers *n n* are held by means of nuts, which hold the shanks of the hammers, or the sockets which hold the hammers by means of the contact between flanges upon these sockets and the face of the head *a*, caused by the draught of the nuts when they are screwed up. These hammers are also arranged to move with the head *a* in a plane parallel with the surface of the table, and they reciprocate towards and from dies *m m*, the hammers moving over the surface of the dies, in grooves cut in said dies. The dies *m m* are posi-

tioned in a groove running across the frame A, at the end of the table, near the head *a*, and they are adjustable in reference to each other to correspond with any adjustment that may be given to the hammers *m m*. The upper surface of these dies is in a plane parallel with the surface of the table, and the grooves in them are located as far above the surface of the table as it is desired to insert the point of the nail in the box above the surface of the table. The front face of these dies extends upward from the table, and lie in a plane at right angles to the face of the table, and are therefore vertical. Attached to each side of the table, at the right and the left, are two uprights, and from the top of one to the top of the other extends a bar, the front face of which is in the same plane as the front face of the dies *m m*; as the uprights are in front of this bar, towards the operator, their parallel sides towards each other form stops on each side of the table, so that a box, when pressed up against the faces of the dies, and the face of the cross bar, may, if desired, be kept in line sidewise, by the edges of these uprights. Above the table is a bar extending across its full width and beyond, the working face of which faces the fronts of the dies *m m*, and is also in a plane at right angles to the surface of the table.

Attached to this bar at each end, and on each side of the table,
124 to the right and to the left, are nuts, in which are two screws, so arranged that when they are revolved the bar is moved towards and from the face of the dies, and parallel to them; also on each end of the bar are pins, passing vertically through the bar, and entering notches spaced in two parallel bars, arranged on each side of the table, and held in bearings upon the side of the table in such a manner, and so connected with the nuts, that when the screws are revolved, the bar across the table, and the two side bars, parallel with the sides of the table, all move together; but if it is desired to adjust the cross-bar in reference to the two sides parallel bars, by raising the two pins in the end of the cross-bar the bar may be moved the distance of one notch, either forward or backward. It is therefore through these pins and the springs which press them down into the notches that the cross-bar is made to move with the nut and the side bars when the parallel screws are revolved.

Across the end of the table, and underneath it, and parallel with its upper surface, and convenient to the hand of the operator, is located a shaft, revolving in bearings, which by means of two bevel gears connecting with two bevel gears upon the two screws cause the screws to revolve together. The mode of operation of the machine is to place two pieces of board which are to form the two sides of a box, one of them vertically against the face of the dies *m m*, so that it will rest against the table at the bottom, and the face of the dies, and the face of the cross bar above, then laying the other side flat upon the table, the screws are turned by the crank on the connecting shaft, until the two parts of the box are crowded together against the face of the dies *m m*, and held there firmly; now nails are laid in the triangular grooves, in the upper surface of the dies *m m*, with their heads towards the hammers *n n*, the point of the nail resting in the angle at the bottom of the grooves. Now the operator puts his foot upon the treadle, and

causes the head *a* to advance with the hammers, and drive the
125 nails into the box, the further advance of the hammers being stopped by means of the shoulders of the sockets coming in contact with the rear face of the dies *m m*; the nails are thus driven into the box, not in a line parallel with the grooves, or parallel with the table, or at right angles to the face of the box, but at an angle thereto, producing the effect which is produced by the carpenter when he slants

the nail before he drives it with the hammer, and joining together two pieces of board with a firmness and solidity which cannot be attained by a direct vertical driving of the nail at right angles to the face of the box.

Now, in my previous description I have intended to give substantially a description of the Patent Office model Exhibit No. 4, and the patent which it purports to represent. In comparing the invention described and shown in the Wicke patent No. 38924 with Exhibit No. 4, and the merchanism described in the patent which it represents, I find that said Exhibit No. 4, according to my understanding, contains none of the inventions set forth and claimed in said Wicke patent, and the only similiarity which I can find between these two forms of mechanism is that they both can drive a nail; but even in that respect they are different, for the nail is differently driven, in reference to the box, in both cases; one, the Ostrum machine, drives a nail as a carpenter drives it, to make it hold the box together in the best manner, while the Wicke machine drives it vertically, so that it has only the adhesion of the wood around the nail to keep the parts of the box from coming apart, and the parallelism of the nails at right angles to the face of the box is more perfect and accurate than can be attained by hand, and that very uniformity and accuracy is an element of weakness in the boxes. The Wicke machine drives the nail vertically, and the Ostrum machine drives the nail horizontally; now I do not pretend that this would make any difference of itself, unless a change of mechanism which is substantial, and a change of mode of operation which is substantial, is required when we
126 make the change of position; I do not find in the Ostrum machine employed any grooved spring jaws H, or any equivalent of them; I do not find a plunger arranged with a disk shaped collar, or any equivalent of the same; I do not find any combination with spring jaws H, any plunger F, constructed and operating substantially as and for the purposes described in the Wicke patent; I find no cam arranged with a circular portion, as is shown in the Wicke patent, nor any equivalent therefor; I do not find any arrangement and combination of one or more adjustable carriages (with or without) the plungers and jaws which belonged in them, and the table J and slide L, constructed and operating in the manner and for the purposes substantially as specified.

My reasons are as follows: the grooved spring jaws of the Wicke patent are for holding the nail and guiding it to its proper place; it is adapted to hold the nail and to guide it to its proper place, only when used in a vertical position; the instrument for holding the nail in the Ostrum machine is not grooved spring jaws; it would not and could not be adapted to hold a nail in a vertical position; it is not a spring jaw, nor is it a pair of spring jaws; it has no characteristic of the grooved spring jaws, for it has no spring action whatever, and can't have. It has no such groove as is in the spring jaws, for in the Ostrum machine the groove in the die is simply a triangular trough, whereas in one-half of the spring jaws, whatever the shape of the groove is, it is certainly tapering and smallest towards the box, and positively closed at that end, the taper of the groove ending in the solid metal, and it is a necessary feature of the grooved spring jaws; this could not be the case with the Ostrum die and have it work. Nor could the grooved spring jaws be substituted in the Ostrum machine for the grooved die, for if the jaws were placed to open horizontally the nail would drop out at the point; if we took off one of the jaws we couldn't even make a beginning towards driving a nail; if we turned the jaws over, so that they would
127 work vertically, we would be no better off if we had but one side

of the jaw, for the nail then would not be guided to the box, and the jaw falling away from the nail would leave its head unsupported. As I said before, there is no equivalent in the Ostrum machine of the plunger, for the plunger, as its name imports, is a shaft sliding in bearings; there is no such instrument whatever in the Ostrum machine, neither is there any carriage, nor any part that corresponds to the carriage; there is what may be called an equivalent for the gate, in so far that it has a movement to and fro, but its construction and its mode of operation is different from the Wicke gate; in the Ostrum machine there are hammers to drive the nails, and they are attached to the head piece *a*, and are adjustable in said head piece; there is no such construction or equivalent for it in the Wicke machine, and if by any strained comparison any of the parts in the Ostrum machine could be made to appear to be equivalent of any of the parts in the Wicke machine, there are not enough of such parts in the Ostrum machine which relate directly to the subject matter of the combinations to make up those combinations.

Adjourned to October 7, 1876, at 10 a. m.

NEW YORK, *October* 7, 1876—10 a. m.

Present, counsel as before.

Adjourned to October 10, 1876, at 10 o'clock a. m.

128 NEW YORK, *October 10th*, 1876—10 a. m.

Present, counsel as before, and the witness WILLIAM C. HICKS, for further examination.

Q. 10. You say that you have seen a machine embodying the prominent characteristics of the Wicke patent, with some additions and modifications to the same; what additions and modifications do you refer to?

A. In the patent there is no means shown for carrying the treadle, connecting rod and lever and cam back from the point to which it has been pressed or carried by the foot of the operator; a spiral spring is furnished in the machine I saw, and attached to the connecting rod, and forces back the connecting rod and lever, and shaft and cam from the point to which it had been carried by the foot of the operator; the guide for the side of the boards of the box to the right of the operator is made in the form of a plate extending downward and outward in a plane at right angles to the plane of the vertical face of the machine against which the box side rests, and from the side of it projects a pin parallel with the table, upon which the operator rests the upper board of the box, to hold it parallel with the table, or in a horizontal position, relieving the operator from the necessity of holding the outer end of that part of the box; this pin is not in the drawing or description of the patent, there being shown only a round adjustable stop at the right hand of the operator, as he stands facing the machine with his foot on the treadle. There is also on the top of the machine that I saw an automatic nail feeding device, not shown in the patent, in addition to the tube shown in the patent for guiding the nail into and between the jaws. There is also a fender (I suppose it is) in connection with the jaws, moved by the plunger in a direction at right angles to the movement of the jaws on the opposite side of the machine from that at which the nail is supplied to the jaws, probably to guide the nail into the jaws. These are all the points of difference which struck my attention.

129 Q. 11. Did you find the addition of the pin, of which you have

just spoken, to be important in the operation of the machine, and give your reasons for any opinion you may express?

(Objected to as leading, suggestive and immaterial.)

A. Yes; it is important, because it keeps the upper side of the box in a horizontal position, which otherwise must be attempted to be done by the hand of the operator, and insures the nailing of the box side to the upright at right angles.

Q. 12. Do you find anything in complainant's patented machine to prevent its use in a horizontal position?

(Objected to as leading and already answered, and as immaterial.)

A. It is not properly organized for use in a horizontal position, and, in my opinion, could not be successfully used in that position.

Cross-examined by Mr. VON BRIESEN:

X Q. 13. Is, in your opinion, the machine described in complainant's patent an operative machine?

A. Yes; I think it could be operated; the operator would be obliged, if the machine was constructed exactly according to the drawings and description, to raise the treadle with his toe; I think he could do it, although it would take him longer.

X Q. 14. You are sure, are you, that that patent does not show means for raising the treadle after its stroke?

A. The spring of the plunger would operate the treadle after it was started, but if the cam had been moved down, as directed in the patent, until the circular part gave no more motion, said circular part would be directly under the shaft centre, and their would be no leverage to
130 raise the cam by means of the plunger spring, and consequently it would not rise until started by some other force.

X Q. 15. What causes you to state that according to the terms of the patent the circular part of the cam would come directly under the shaft, and do you believe it possible from inspecting figure 2 of the drawing in the patent that by the action of the treadle upon the lever *b* the circular part of the cam could be brought directly under the shaft?

A. I find in the patent these words bearing upon this point: "The cam C, on being turned in the direction of the arrow marked on it, in Fig. 2, depresses the gate B, until the circular portion *e*, *f* bears upon the gate; this portion of the cam is made to form part of a circle described from the centre of the shaft D, so that the cam may be turned more or less without depressing the gate B any further than desirable." From this it is perfectly clear that the curve of the cam must be brought under the centre of the shaft, in order that it may be moved more or less, without the pressing of the gate; now whether all the parts are so proportioned that this can take place, I haven't examined with great care, neither do I consider it of much consequence; but the cam can turn in the gate sufficiently to do that; it would be hard work by the treadle and rod, as it is connected, to get motion enough to turn the cam as far as necessary, but that would simply render the operation of the machine different from the description, and I am inclined to make all allowance for such inaccuracies.

X Q. 16. Look at the model now shown you, and state whether it represents the machine described in complainant's patent, and state all the differences that you can find?

(Objected to as incompetent, no such model being introduced in the case. Counsel for complainant gives notice that he will introduce such model in his rebutting examination, and that his object in intro-
131 ducing it at this time is to permit defendant to refer to it during

his direct examination. The model is offered in evidence, and marked "Complainant's Exhibit No. 5, J. M. D., ex'r." The introduction of this model in evidence is objected to on the ground: First, as incompetent at this stage of the proceedings; Second, as it is not shown to be an exact copy or embodiment from the Wicke patent.)

A. No, it don't; there are a good many minor differences; those that are most prominent I will mention; in the patent there is no spring shown under the treadle, neither is any spring attached to the hub of the lever on the cam shaft; in the model there is a spring in each of those places. In the model there are three plungers and carriages, all constructed differently, as to the jaws attached to the carriage. The cam is so arranged that it can turn down on to its centre; but the connecting rod, as it is now partitioned, that is, in the hole nearest the shaft, that the lever cannot turn far enough down to carry the cam to its dead point, or point of no motion. With the amount of motion which can be obtained by the foot lever, the jaws are not opened by the plungers; the middle jaw is made, as to its external form, so as to substantially correspond with the drawings of the patent; the other two are shifted around at right angles; looking at them sidewise, or as shown in figure 1, they appear about as the other or central jaw appears looking at it facewise; but looking at the left hand jaw facewise, there is a split running through the whole length of the jaws in a plane concentric with the centre line of the plunger and parallel with the split in the central jaws, but it is not through the lower portion of the jaws, as shown in the patent, but divides the whole length of each side of the jaws entirely up to the carriage. Looking at the said left hand jaws upon the side, there is no split on the line of the axis of the plunger and as shown in the patent, but that view pre-
132 sents a solid surface where the jaws are split in the patent; the shaft in this machine is not placed as in the drawings of the patent, out of the centre of the machine as shown in Fig. 2, but is placed substantially central in the model; the plungers in this machine are not constructed as shown in the patent, but are made so that they may turn around, whereas in the patent they are shown with a groove, to prevent their turning around. The swell of the plunger for opening the jaw is in the model made partially spherical on all sides; in the drawings of the patent they are not shown spherical, but swelled in one direction only; that is to say, in the direction towards the right and the left, as shown in Fig. 2, the other two sides being substantially straight, as is shown in Fig. 1. There is a plate attached to the gate in the model, below it, which stops the gate from rising too far; this is not shown in the drawing. There are other minor differences which I need not mention.

X Q. 17. What makes you think that a groove in a plunger would prevent them turning around, and are you sure that the patent shows a groove in the plunger?

A. There is no doubt in my mind that there is a groove shown in the plunger, and there appears to be a piece put on the carriage shown in both views, and with two screws in figure 2, on top of the carriage, which may be, but I am not certain that it is, an arrangement for entering the groove; and as the plunger with its hammer end must not turn around, I have no doubt but that this is an arrangement to prevent it from doing so.

X Q. 18. What did you mean by the words "on his own hook," in your answer to question 5?

A. I mean that there being no means to put them into operative combination, each one would stand uninfluenced by the other.

X Q. 19. Do you mean to say that in operating the complainant's machine the slide L could be used without having a table beneath to support the board, or without having the plungers above to perform the work described in the patent?

133 A. No, I do not; and for that reason I have said that the claim as it stands means nothing to me, which is practically operative without putting the plungers and jaws into the carriages, and adding them to the claim, in which they are not referred to in terms.

(Latter part of answer objected to as not responsive.)

X Q. 20. You have stated that it is not your province to decide whether certain parts co-operate so as to produce a legal combination; am I to understand you that it is improper for an expert witness on the stand to give his view of the legality of the combination claimed?

(Objected to as improper, calling for a legal conclusion.)

A. I do not think that an expert can help looking upon a combination of machinery in a patent case in such a way as to form an intelligent opinion as to what the words or the language should from his standpoint mean, and he necessarily brings in whatever knowledge he may have as to what constitutes combinations in the eyes of the law; but he should not undertake to decide such questions for himself or others; but I think he may be allowed modestly to express a doubt as to the legality of a claim which seems to be to him a description of mechanism which would not operate without the addition of other parts to complete the combination; and I believe that he is bound, if he possibly can understand the mechanism and its mode of operation from anything in the patent, to do so, and to leave to the court to decide as to what is a valid or invalid claim.

X Q. 21. In your answer to question 5 you say: "But if I place in the carriage F the plungers and jaws which belong there, I would get a mechanism which would operate;" why do you say if I place, and don't you find the plungers and jaws placed in the carriages described in said patent?

134 A. I think the context will clearly show why I said if I place the plungers; for the reason that they are not described in terms in the claim; the plungers and jaws are distinctly shown in the carriages, and described in the description and drawings of the patent, as I have said before.

X Q. 22. What part of the language in complainant's patent do you deem inartistic, and state also why you prefer artistic to plain language in a patent?

A. Perhaps I had better answer the last question first. I deem the plainest language in a patent the most artistic; the specification says that the invention consists in the employment of certain mechanism; he speaks of a number of rising and falling plungers, it leaves out from the specification the description of mechanism, which must obviously be supplied, in order to give its practical efficiency; the details of some of the parts are described in too general terms, leaving too much to be supplied by the imagination. I do not think that these points are so defective as to mislead the constructor, or to prevent him from understanding how to make the machine, so that it would work in the way he made it, although it might not be exactly like the way the inventor made it; therefore I have used the word inartistic.

X Q. 23. Is the language that you have employed in giving your testimony what you would term artistic?

A. I should hardly venture to express an opinion.

X Q. 24. Have you ever seen one of the defendant's machines in operation?

A. I have seen a machine in operation made by the defendant, but not constructed, in my opinion, like the machine about which I have been testifying, and which have been called the defendant's machine.

(All after the word "operation" objected to as volunteer, and not responsive.)

X Q. 25. Why did you add to your last answer matter not embraced in my question?

135 A. I think the substance of my answer was embraced in the question clearly, and I did so that my answer might be understood, and prevent confusion.

X Q. 26. Describe in what the defendant's machine, which you saw, differs from Exhibit No. 4?

(Objected to as incompetent, and as not proper cross-examination. Complainant's counsel is notified that he makes the witness his own. Complainant's counsel deems the objection in bad faith, as all the defendant's nailing machines are here in controversy, and so stated in the bill of complaint.)

A. I will try to mark out such points as I remember. There are no dies for the nails in the machine I saw, but the nails are placed in a grooved bench extending the whole width of the table, the grooves being in the shape of a V, and spaced at equal distances apart in the upper surface of the bench, otherwise the bench substantially corresponds with the exterior face, top, and back of the dies in Exhibit No. 4, being in about the same relative position. In place of the hammers on Exhibit No. 4 there is a lip corresponding to the bench, the under surface of which lip is in a plane parallel with the table and the upper surface of the bench, and is arranged to move back and forth nearly in contact with the upper surface of the bench, and extends over the whole surface of the bench when moved to its extreme forward position towards the operator, so that its front face then lies in the same plane as the front surface of the bench. Now, on the under surface of this lip are V-shaped projections, raised by planing away the metal between them, and these raised portions are V-shaped, and fit into the grooves in the bench, being as many in number as the grooves in the bench; the nails are laid in these grooves, and the projections on the under side of the lip drive forward such nails as may be placed in the grooves. I

136 should say that on the machine I saw there were fifteen or sixteen grooves, so that the spaces between the nails must be such a distance as can be divided by one space. The table and the frame, as far as I recollect, were substantially the same as shown in this patent; but in place of the screws for driving up the clamping bar, a treadle and lever is substituted, so that the box is clamped by the action of the foot, and by the continued action of the same foot the nails are driven. There was some arrangement upon this machine for adjusting the two boards sidewise, and it was adjustable. I have described now about all the details of the machine that I remember, worthy of mention.

X Q. 27. Was that part of said machine, which you have termed the lip, a piece of corrugated metal?

(Same objection.)

A. No; it was, as I have described it, in part, a piece of cast iron, with the projections made by planing, and it was fixedly attached to the sliding head or carriage, which was moved by the foot of the operator.

X Q. 28. Am I to understand you to say that it was a plate of metal,

so shaped by planing on its under side as to form a series of projecting hammers or plungers, corresponding respectively to and fitting into a similar series of grooves or depressions, in what you have termed the bench?

(Same objection.)

A. I have no objection to calling them hammers or plungers, although the projections are not hammers or plungers, but they do fit in the grooves, as the question supposes, and they drive the nails.

X Q. 29. They drive the nails which have previously been placed in the grooves; is that it?

A. Yes; they do.

X Q. 30. What is the function of a hammer in the sense in which you have used that word in the description of Exhibit No. 4?

137 A. It drives a nail.

X Q. 31. By what kind of motion, rectilinear, or what?

A. Rectilinear.

X Q. 32. Was that machine of the defendant's, which you have described to day, adapted and intended to drive a series of nails simultaneously by the rectilinear motion of the projections, on what you have termed the lip?

(Objection to question 26 repeated.)

A. Yes.

X Q. 33. What do you understand by an equivalent in the sense in which you have used that term in your answer to question 9?

A. What I mean by an equivalent, when speaking of mechanism, as part of a combination, is a piece of mechanism which performs substantially the same office, in substantially the same way, to produce substantially the same result.

X Q. 34. What is a plunger?

A. A piece of metal having a reciprocating motion, working within something else which encloses it partially or wholly; for instance, like a pump bucket.

WM. C. HICKS.

Subscribed and sworn before me this 10th day of October, 1876.

J. M. DUEAL, *Ex'r.*

Defendant rests.

Complainant gives notice that he will commence to take rebutting testimony on Thursday, October 19, 1876, at 11 a. m., at the office of his counsel, No. 258 Broadway, New York City.

138 United States circuit court, southern district of New York, second circuit. In equity.

WILLIAM WICKE
vs.
HENRY P. OSTRUM.

SIR: You are hereby notified that the defendant will, on the trial of this cause, prove that the matter of invention set forth and claimed in the fourth claim of complainant's patent has been in public use in this country for more than two years before his application for a patent, and that a patent for the same was granted to Charles Atwood, dated November 12th, 1850, and that the following persons had prior knowledge of the same and used the same:

William W. Hyde, of New Haven, Connecticut, had knowledge of the

same, used by the Russell Manufacturing Co., of Middletown, Connecticut, and Joseph B. Sargent, of 132 Wooster street, New Haven, Connecticut, and George Perry, of New Haven, Connecticut, had prior knowledge of the same as used by said Sargent at Lester, Mass., and that Jarvis E. Kelsey and George R. Kelsey, of New Haven, Conn., had prior knowledge of the same, as used by the West Haven Buckle Company, of Orange, Connecticut.

Dated Aug., 1876.

Yours, &c.,

N. A. CALKINS,
Solicitor, and of Counsel for Defendant.

To A. V. BREISEN,
Solicitor, &c., for Complainant.

139 (Endorsed:)

I admit service of the within notice this 31st August, 1876; but under absolute protest as to the competency of the notice, and this protest will be insisted upon at the hearing.

A. V. BRIESEN.

Marked Defendant's Exhibit No. A.
Sept. 7th, 1876.

J. T. PLATT,
U. S. Comm.

Filed Sept. 15, 1876.

Defendant's Exhibit No. C.

SEPT. 7TH, 1876.

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted George Wicke, dated June 16th, 1863, No. 38924, for improvement in machine for nailing boxes.

In testimony whereof I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this 24th day of May, in the year of our Lord one thousand eight hundred and seventy-six, and of the Independence of the United States the one hundredth.

[L. S.]

W. H. DOOLITTLE,
Acting Commissioner.

140 The United States of America to all to whom these letters patent shall come:

Whereas George Wicke, of New York, New York, has alleged that he has invented a new and useful machine for nailing boxes, which he states has not been known or used before his application, has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said invention; and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents, signifying a desire to obtain an exclusive property in the said invention, and praying that a patent may be granted for that purpose:

These are therefore to grant, according to law, to the said George Wicke, his heirs, administrators, or assigns, for the term of seventeen years from the sixteenth day of June, one thousand eight hundred and sixty-three, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said invention, a description whereof is given in the words of the said George Wicke, in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this sixteenth day of June, in the year of our Lord one thousand eight hundred and sixty-three, and of the Independence of the United States of America the eighty-seventh.

W. T. OTTO,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
[L. S.] D. P. HOLLOWAY,
Commissioner of Patents.

141 The schedule referred to in these letters patent and making part of the same:

To all whom it may concern:

Be it known that I, George Wicke, of the city, county, and State of New York, have invented a new and improved machine for nailing boxes, and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 represents a sectional side elevation of my invention.

Figure 2 is a front elevation of the same.

Similar letters of reference in both views indicate corresponding parts.

The object of this invention is to drive the nails which hold together the several boards constituting a box for cigars or for other articles. The nails are generally driven by a hammer, each nail for itself, which obviously is a very tedious operation.

This invention consists in the employment of grooved spring jaws, for the purpose of holding the nails, and to guide them to their proper place. And it consists further in combining with said spring jaws a corresponding number of rising and falling plungers, for the purpose of driving each nail singly, and all at the same time; and also in arranging said plungers with globe or disk-shaped collars in such a manner that they spread the grooved spring jaws at the proper moment and allow the heads of the nails to pass; also in arranging the cam that serves to depress the plungers with a circular portion, in such a manner that the plungers cannot be depressed any further than necessary to drive the nails. Finally, in the general arrangement and combination of all the parts, so that the plungers and jaws, as well as the table which supports the boards, can be adjusted according to the different sizes of boxes to be made.

142 To enable others skilled in the art to make and use my invention, I will proceed to describe it.

A represents a frame of cast-iron or of any other suitable material; screwed to the upper part of this frame, by means of angular guide-pieces, *a* is the rising and falling gate B, which is operated by means of a cam C, on the end of a shaft D, which connects by an arm *b* and rod *c* with the treadle *d*.

The cam C, on being turned in the direction of the arrow marked on

it in Figure 2, depresses the gate B until the circular portion, *e f*, bears upon the gate. This portion of the cam is made to form part of a circle, described from the centre of shaft D, so that the cam may be turned more or less without depressing the gate B any further than desirable.

The gate B acts on one or more plungers E, each of which moves up and down in the carriage F, and a spring *g* has the tendency to raise the plunger after the same has been depressed, or to keep it up when not exposed to the action of any power. The carriage F slides in a lateral direction on ways G, and it is adjusted at the proper point, where the nail is to be driven, by set screws *h*. A series of plungers, to correspond to the number of nails to be driven simultaneously, may be so arranged that by depressing the treadle all the plungers are depressed, and, consequently, all the nails inserted at the same time.

The lower end of the plunger E is turned down, as clearly shown in the drawing, leaving them just large enough to cover the heads of the nails to be driven, and a disk-shaped collar *i* is formed at a short distance above these lower ends.

When depressed the plunger enters the spring jaws H, which are secured to the sides of the carriage F. These jaws are provided with grooves *j* to receive the nails, (see Figure 1), and they are so formed that when the plunger descends the disk-shaped collar *i* spreads the same, allowing the head of the nail to pass freely through the grooves *j*.

143 The nails are fed through an inclined tubular channel I, one after the other, and if several plungers are used the whole series are depressed by one motion of the cam C.

A table J, on the lower portion of the frame A, serves to support the boards to be nailed, and this table is adjusted by means of a screw-spindle K. Said boards are adjusted in a correct position by a slide L, which is adjustable in a groove *i*. A small recess in the frame A allows the horizontal boards to project very little beyond the edge of the vertical board, so that the rough edges of the boards can be removed by the aid of a plane after the nailing has been accomplished.

The table J, the slide L, and the plunger or plungers can thus be adjusted to suit boxes of different size, and the nails are driven simultaneously by one motion of the foot.

What I claim as new and desire to secure by letters patent is:

1st. The employment of the grooved spring jaws H, substantially as described, for the purpose of receiving the nails and to guide them to their proper places.

2d. The combination with the spring jaws H of the rising and falling plungers E, constructed and operating substantially as and for the purpose described.

3d. Arranging the plunger E with a disk-shaped collar *i* or its equivalent, to operate in combination with the spring-jaws H, substantially as and for the purpose specified.

4th. The arrangement of the circular portion *e f* on the cam C, to operate in combination with the gate B and treadle *d*, substantially as and for the purpose set forth.

5th. The arrangement and combination of one or more adjustable carriages F, table J, and slide L, constructed and operating in the manner and for the purpose substantially as specified.

GEORGE WICKE.

Witnesses:
GEO. W. REED.
W. S. PARTRIDGE.

145 *Defendant's Exhibit No. D.—J. M. D., Ex'r.*

SEPTEMBER 25, 1876.

The U. S. Patent Office to all to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted Henry P. Ostrum, dated January 25th, 1876, No. 172,579, for improvement in machines for nailing boxes.

In testimony whereof I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this sixteenth day of June, in the year of our Lord one thousand eight hundred and seventy-six, and of the Independence of the United States the one hundredth.

[L. S.] W. H. DOOLITTLE,
Acting Commissioner.

No. 172579.

The United States of America to all to whom these presents shall come:

Whereas Henry P. Ostrum, of New Haven, Connecticut, has presented to the Commissioner of Patents a petition praying for the
146 grant of letters patent for an alleged new and useful improvement in machines for nailing boxes, a description of which invention is contained in the specification, of which a copy is hereto annexed and made a part hereof, and has complied with the various requirements of law in such case made and provided; and

Whereas, upon due examination made, the said claimant is adjudged to be justly entitled to a patent under the law:

Now, therefore, these letters patent are to grant unto the said Henry P. Ostrum, his heirs or assigns, for the term of seventeen years from the twenty-fifth day of January, one thousand eight hundred and seventy-six, the exclusive right to make, use, and vend the said invention throughout the United States and the territories thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the city of Washington, this twenty-fifth day of January, in the year of our Lord one thousand eight hundred and seventy-six, and of the Independence of the United States of America the one hundredth.

B. R. COWEN,
Acting Secretary of the Interior.

Countersigned:
[L. S.] R. H. DUELL,
Commissioner of Patents.

148 UNITED STATES PATENT OFFICE.

Henry P. Ostrum, New Haven, Connecticut. Improvement in machine for nailing boxes. Specification forming part of letters patent No. 172579, dated January 25th, 1876. Application filed September 11th, 1875.

To all whom it may concern:

Be it known that I, Henry P. Ostrum, of the city and county of New

Haven, State of Connecticut, have invented an improvement in machines for nailing boxes, and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use it, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a direct end view or elevation of the end of the machine. Figure 2 is a perspective view of the machine.

My invention relates to that class of machines which are used for nailing together the sides and ends of boxes, in which any required number of nails may be simultaneously driven by a treadle or other means, and consists in a novel construction and arrangement of parts hereinafter more fully set forth and claimed

The letter *A*, Fig. 2, indicates a platform of cast iron, having projections on its under side in which the rod *y*, screws *p p*, and rock shaft *G* turn, and on which the ratchets *o o* move back and forth. This platform, with the legs attached, constitutes the frame of the machine. The rest *B* is a staight bar of metal extending across and beyond the platform *A*, and has pins *x x* passing through holes in the same, which are forced down upon the ratchets *o o* by springs attached to the rest. It is also provided with the guides *i i*, which slide between the side edges of the platform and the ratchets *o o*. The ratchets *o o* are straight bars of iron with notches on their upper sides, and *and* are movable back and forth, on the projections from the under sides of the platform, and extending beyond it. Each of these ratches has a nut attached to it, in which the screws *p p* turn and by which the ratchets are moved. Only one of these screws is shown in the drawing. In the front projection from the under side of the platform are two screws or threaded bolts *p p*, Fig. 2, which turn in the projection and in the nuts attached to the ratchets, and have a bevel-gear wheel attached, by which they are turned. The shaft *y* is also made to turn in the projections from the under side of the platform, and is furnished with two bevel-gear wheels, which mesh in the bevel-gear wheels on the screws *p p*, and is also furnished with a crank on one of its ends. The elevated straight bar *r*, supported on two posts attached to the platform, is arranged so that its front side and the front ends of the dies *m m m* are in the same plane, and serves to hold one of the pieces to be nailed at right angles to the other piece resting on the platform. The dies *m m m* vary in number with the nails to be driven; are made with slots on their upper sides, which are enlarged at their ends nearest the hammers, to correspond with the size of the heads of the nails placed in them; and to allow the nails to lie parallel with the platform, or nearly so, and are fitted into the dovetailed slot in the platform. They are loosely held in their places by the hammers, and may be, when desired, securely held by a wedge in the dovetailed slot, moved by a screw on its outer end.

The head *a* is a bar of cast metal, extends across the platform, and has on its ends enlargements or cross pieces, which slide on the platform. It is held in its place by the pieces *f f*, screwed to the platform, and has a slot in which the hammers are held, and a pin, *e*, in each of the enlargements or cross pieces which fit in the slots in the short arms *d d* of the rock shaft *G*, by which the head is moved back and forth. The hammers *n n n* vary also in number with the nails to be driven, and are in the form of a threaded bolt with a head, from the front ends of which small rods, a little larger than the nails to be driven, project into the enlarged end of the slots in the dies. They are

145 *Defendant's Exhibit No. D.—J. M. D., Ex'r.*

SEPTEMBER 25, 1876.

The U. S. Patent Office to all to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted Henry P. Ostrum, dated January 25th, 1876, No. 172,579, for improvement in machines for nailing boxes.

In testimony whereof I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this sixteenth day of June, in the year of our Lord one thousand eight hundred and seventy-six, and of the Independence of the United States the one hundredth.

[L. S.] W. H. DOOLITTLE,
Acting Commissioner.

No. 172579.

The United States of America to all to whom these presents shall come:

Whereas Henry P. Ostrum, of New Haven, Connecticut, has presented to the Commissioner of Patents a petition praying for the
146 grant of letters patent for an alleged new and useful improvement in machines for nailing boxes, a description of which invention is contained in the specification, of which a copy is hereto annexed and made a part hereof, and has complied with the various requirements of law in such case made and provided; and

Whereas, upon due examination made, the said claimant is adjudged to be justly entitled to a patent under the law:

Now, therefore, these letters patent are to grant unto the said Henry P. Ostrum, his heirs or assigns, for the term of seventeen years from the twenty-fifth day of January, one thousand eight hundred and seventy-six, the exclusive right to make, use, and vend the said invention throughout the United States and the territories thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the city of Washington, this twenty-fifth day of January, in the year of our Lord one thousand eight hundred and seventy-six, and of the Independence of the United States of America the one hundredth.

B. R. COWEN,
Acting Secretary of the Interior.

Countersigned:
[L. S.] R. H. DUELL,
Commissioner of Patents.

148 UNITED STATES PATENT OFFICE.

Henry P. Ostrum, New Haven, Connecticut. Improvement in machine for nailing boxes. Specification forming part of letters patent No. 172579, dated January 25th, 1876. Application filed September 11th, 1875.

To all whom it may concern:

Be it known that I, Henry P. Ostrum, of the city and county of New

Haven, State of Connecticut, have invented an improvement in machines for nailing boxes, and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use it, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a direct end view or elevation of the end of the machine. Figure 2 is a perspective view of the machine.

My invention relates to that class of machines which are used for nailing together the sides and ends of boxes, in which any required number of nails may be simultaneously driven by a treadle or other means, and consists in a novel construction and arrangement of parts hereinafter more fully set forth and claimed

The letter *A*, Fig. 2, indicates a platform of cast iron, having projections on its under side in which the rod *y*, screws *p p*, and rock shaft *G* turn, and on which the ratchets *o o* move back and forth. This platform, with the legs attached, constitutes the frame of the machine. The rest *B* is a staight bar of metal extending across and beyond the platform *A*, and has pins *x x* passing through holes in the same, which are forced down upon the ratchets *o o* by springs attached to the rest. It is also provided with the guides *i i*, which slide between the side edges of the platform and the ratchets *o o*. The ratchets *o o* are straight bars of iron with notches on their upper sides, and *and* are movable back and forth, on the projections from the under sides of the platform, and extending beyond it. Each of these ratches has a nut attached to it, in which the screws *p p* turn and by which the ratchets are moved. Only one of these screws is shown in the drawing. In the front projection from the under side of the platform are two screws or threaded bolts *p p*, Fig. 2, which turn in the projection and in the nuts attached to the ratchets, and have a bevel-gear wheel attached, by which they are turned. The shaft *y* is also made to turn in the projections from the under side of the platform, and is furnished with two bevel-gear wheels, which mesh in the bevel-gear wheels on the screws *p p*, and is also furnished with a crank on one of its ends. The elevated straight bar *r*, supported on two posts attached to the platform, is arranged so that its front side and the front ends of the dies *m m m* are in the same plane, and serves to hold one of the pieces to be nailed at right angles to the other piece resting on the platform. The dies *m m m* vary in number with the nails to be driven; are made with slots on their upper sides, which are enlarged at their ends nearest the hammers, to correspond with the size of the heads of the nails placed in them; and to allow the nails to lie parallel with the platform, or nearly so, and are fitted into the dovetailed slot in the platform. They are loosely held in their places by the hammers, and may be, when desired, securely held by a wedge in the dovetailed slot, moved by a screw on its outer end.

The head *a* is a bar of cast metal, extends across the platform, and has on its ends enlargements or cross pieces, which slide on the platform. It is held in its place by the pieces *f f*, screwed to the platform, and has a slot in which the hammers are held, and a pin, *e*, in each of the enlargements or cross pieces which fit in the slots in the short arms *d d* of the rock shaft *G*, by which the head is moved back and forth. The hammers *n n n* vary also in number with the nails to be driven, and are in the form of a threaded bolt with a head, from the front ends of which small rods, a little larger than the nails to be driven, project into the enlarged end of the slots in the dies. They are

provided with nuts, by which they are held in the head *a*, and by which they may be adjusted at any distance apart. The rock shaft *G*, arranged under the platform, is made to turn in projections from the platform, and with a long arm *E* extending nearly to the front side of the machine; also with two short upright arms, *d d*, having slots in their ends. A spiral spring extends from the long arm, and is attached to the under side of the platform, and draws the arm upwards, while the short arms move the head *a* backward.

The treadle *D* is a part of, or is attached to, a bar, extending to a shaft pivoted to two of the legs of the frame, or is otherwise suitably constructed; it is also suitably connected to the long arm of the rock shaft.

With the above description of the parts of my machine, its operation will be readily understood. As the pieces to be nailed together are placed, the one perpendicularly against the front ends of the dies *m m m*, and against the elevated bar *a*, and the other on the platform against the first, and as the rest *B* is adjusted against it by the pins *x x*, operating on the ratchets *o o*, as pawls, the pieces are then screwed together between the dies *m m m*, and the rest *B*, by turning the rod *y*, geared to the screws *p p*, moving the ratchets *o o*, and the rest *B*. The frame *A*, the dies *m m m*, and the rest *B*, adjusted by the pins *x x*, acting on the ratchets *o o*, and moved by the screws *p p*, co-operate to tightly
151 hold the pieces to be nailed. The pieces being thus held, as the treadle *D* is forced downward, the head *a*, with the hammers *n n n*, is forced forward, driving the nails placed in the slots in the dies *m m m*, to their places, nailing the two pieces together.

I am aware of the patent granted to M. Blaser, No. 155284, September 22, 1874, and hereby disclaim the same.

I claim as my invention—

The combination of frame *A*, treadle *D*, rock shaft *G*, head *a*, provided with one or more adjustable hammers, *n n*, one or more adjustable dies, *m m*, and the rest *B*, all the said parts constructed and combined substantially as set forth.

HENRY P. OSTRUM.

Witnesses:
GEORGE TERRY.
ROGER M. SHERMAN.

Defendant's Exhibit No. E.—J. M. D., Ex'r.

SEPTEMBER 25, 1876.

DEPARTMENT OF THE INTERIOR.

U. S. Patent Office to all to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the re-
152 cords of this office, of the letters patent granted Charles Atwood and George Kellogg, dated November 12th, 1850, No. 7768, for machine for making jack chains.

In testimony whereof I, W. A. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereto affixed, this thirty-first day of August, in the year of our Lord one thousand eight hundred and seventy-six, and of the Independence of the United States the one hundredth and first.

[L. S.]

W. A. DOOLITTLE,
Acting Commissioner.

The United States of America to all to whom these letters patent shall come:

Whereas, Charles Atwood and George Kellogg, of Birmingham, Connecticut, have alleged that they have invented a new and useful machine for making Jack Chains, which they state has not been known or used before their application, have made oath that they are citizens of the United States, that they do verily believe that they are the original and first inventors or discoverers of the said invention, and that the same hath not, to the best of their knowledge and belief, been previously known or used; have paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said invention, and praying that a patent may be granted for that purpose.

153 These are therefore to grant, according to law, to the said Charles Atwood and George Kellogg, their heirs, administrators, or assigns, for the term of fourteen years, from the twelfth day of November, one thousand eight hundred and fifty, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used the said invention, a description whereof is given in the words of the said Atwood and Kellogg in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed, given under my hand at the city of Washington, this twelfth day of November, in the year of our Lord one thousand eight hundred and fifty, and of the Independence of the United States of America the seventy-fifth.

ALEX'R H. H. STUART,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
[L. S.] THOS. EWBANK,
Commissioner of Patents.

Charles Atwood & George Kellogg, of Birmingham, Conn., letters patent No. 7768, dated November 12th, 1850.

To all whom it may concern:

Be it known that we, Charles Atwood and George Kellogg, both of Birmingham (Derby), in the county of New Haven, and State of
154 Connecticut, have jointly invented a new and useful machine for making Jack Chains from wire, cutting the wire, bending the links, and interlocking them, continuously.

To enable other machinists to make and use our invention, we do hereby declare that the following is a full and exact description thereof.

The operation of our machine is to take the wire from the whole piece or hank and feed it in in suitable lengths, successively, for a link, and bending, cutting off, and forming a link, and holding it on the machine until the wire for another link is fed in, and thrust through the bow of the first link and bent, or beginning to be bent, then cut off, and the first bow of the second link bent, interlocking the first link and holden, until the second bow of the second link is bent and formed and drawn back the length of the second link, which is still holden until another length of wire for the third link is fed in and thrust through the last bow of the second link as before, and so on continuously dropping one link while the next is forming. Each part of the process is performed in

quick succession, and so the chain is made as fast as the links are dropped or released from the machine.

The bows of each link are formed by being bent around two suitable shaped pins or studs, generally round ones, of cylindric form, but in order to bend a circular bow around a cylinder pin or stud, and at the same time embrace and interlock the wire of the preceding bow, there should be a flute or recess in one of the studs sufficient to receive and nearly bury the wire of the preceding bow, so that the cylindric pin or stud, with the wire in its recess, shall still be nearly cylindric, or of the proper form designed for the bow, so that the bow shall be circular or of the proper form.

We have several methods of bending the wire around the stud which forms the first bow of the link, either by dies attached to the jaws of tongs, made to open and shut, and to approach to and recede from the stud-pin, shutting as they approach the stud, and bending the wire around it, and then the stud being withdrawn downward, the dies recede, and still holding the bow (the without the stud in it) until another wire is fed in, as is hereinafter more fully explained, and then the jaws and dies open, and drop or release the link as finished; the jaws and dies being open, advance and shut to bend the first bow of the next link, as before described.

We have another method of forming the first bow of the link, which is to make the dies simply to open and shut, without advancing or receding, and in this mode the stud is attached to a moveable plate, and with this plate, the stud advances and recedes to and from the dies; advancing when the dies are open, a little forward of the ends of the open dies, and after the wire is fed in between the stud and the opening between the dies, the stud recedes, as the wire is cut off between the open dies, to its central or proper position, carrying the wire and partly bending it by drawing it laterally into this opening, which should be a little greater than the diameter of the stud, added to twice the diameter of the wire, and by closing or shutting the dies around the stud, the bending of the first bow of this link is finished; but it is still holden in the dies until the second bow is bent, as herein described; in the meantime, the movable plate, with the stud retracted below the face of the plate, is moved forward equal to the length of one link, so that the stud being again protruded just forward of the last bent bow, so that the end of this bow is just embedded in its recess, and is now ready for another wire to be fed in, &c., as before.

After the first bow is bent in either of the foregoing ways, or in any other way substantially the same, the bending of second or last bow of the link is performed by a spindle or mandrel, set in a line nearly parallel to the plane of the first formed bow, so that it may revolve partly round in a plane at right angles with the first bow; in the end of this mandrel is a central stud around which the second bow is bent; and near this stud, a little more than the diameter of the wire from it, is a kind of trip, acting like one jaw of tongs or pliers, to gripe or press the end of the wire against the stud, to prevent its slipping while bending; and this mandrel, with its central stud, and its griping jaw, has three compounded motions; it is hung so that it can revolve about three-fourths of a circuit and back again, and roll over towards the first formed bow while it is bending the second, and transverse endwise, approaching the end of the wire to embrace it before it is bent, and releasing its hold and receding from it after it is bent, and then swinging back to its first position; but while this mandrel is bending or rolling up this bow, it does not proceed horizon-

tally, or on the plane of the first bow, but descendingly, about one-half of the diameter of the stud, so as to set the centre of the circle of this bow nearly on the plane of the first bow, so that the planes of the two bows shall intersect each other about centrally, and at about right angles, in order to form a symmetrical link of this kind. Now, both bows of the link being bent, and the mandrel having receded from the last one, and the link being holden by the first one, and the dies having receded, or the stud having advanced one link for in either way the effect is nearly the same), and the stud being again protruded as before described, the wire for the next link is fed in, and thrust about one-fourth part of its length through or beyond the last bow, and beyond the stud, and is ready for cutting off and bending as before; and repeating the same process for each link as the chain progresses.

Though we have several methods of bending the bows of the links, yet we consider that the dies attached to the jaws of what we call the tongs for bending the first bow, and bending the last bow by the partly revolving mandrel, as before described, to be the best, as being
157 more compact and substantial, and most convenient, and which we will proceed to explain more particularly with the drawings and references hereto annexed, and forming a part of this specification.

We give all the motions of the parts from cams, as follows, viz: A to A, in the perspective figure 1, is the main cam shaft, on which is set a number of different cams, which give the various motions to the several parts, which shaft is itself moved by the pulleys and fly-wheel upon it. The cam B, which is partly seen, lifts the end of the spring lever S, which acts across its fulcrum, so that when the end of the cam is raised, the other end is pressed down upon a disc, F, which presses upon the wire W, which passes under it and over a sliding block in which a pin is set firm, and the disc having a hole through its centre fits loosely on the pin, and the pin has a hole through it in the direction of the wire, and the wire passes through this hole on the level of the sliding block, so that when the disc presses upon the wire it is holden fast to the slide block and can only move with it, and when the pressure on the disc ceases the wire is loosened, and then the disc and slide block can move backward without carrying the wire, to take hold of a new length wire and feed it forward in like manner, and so on successively, the spring being moved edgewise across a pin through its fulcrum; the cam B give' all these feed motions.

The cam C moves the stock c^2 a very small distance endwise, in which stock is set the small wheel cutter c^3, which acts like shears to cut off the wire at the proper time, after each link is fed in, and the stock and cutter is drawn back immediately after each cut by the spring marked 7.

The cam D gives the several movements to the tongs T^1 and T^2, that is, by forcibly opening their legs, their jaws are forcibly closed, having each its fulcrum at the pin p, and in the part of this cam, where
158 their legs are permitted to approach each other, they are made to do so by the springs 1—2—and by so doing the jaws are opened, and the outer edge of this cam thrusts the tongs forward, and permits them to retreat or recede at the proper times, being ordinarily drawn back by the springs marked e 3 4; but as the springs may not always bring the tongs back, and injury may follow therefrom, we place another cam as seen at H, which operates by a slide L, L, which is attached to one leg of the tongs so as to force them to recede at the proper time.

The cam F, by acting against the round stud f, causes the lifter f to rise and fall, and this lifter acts on a lever under the machine, and moves the stud pin i i up and down through a plate under the dies

d d, at the place where the first bow is bent, as is hereinafter further explained.

The cam E has a kind of lig lag channel around it, or acts both ways laterally, to move the end of the lever O across its fulcrum, the other end of which lever enters between the two schields *e e* of a sliding pulley or collar on the mandrel M, and this collar, by slipping endwise of the mandrel, moves a small slide embedded in it in a deep flute or channel, in which channel is also embedded the tail or shank of the plyer or nipper jaw *n*, and the end of the slide is made to act like a wedge under the shank and by raising it depress the nipper jaw so as to gripe the end of the wire against the stud pin in the end of the mandrel at *p* to hold and prevent the slipping of the wire while the second bow of the link is bent by the rolling motion of the mandrel, and then sliding the wedge in the contrary direction by the slipping collar or pulley, the nipper jaw relaxes its gripe on the wire and is opened, while the mandrel recedes to its first position, leaving the last bow of the link done; yet as the cam does not force the end of the lever both ways throughout its whole circuit, the spring marked 5 is added to hold it against one side of the channel.

159 The cam G acts against a round stud on the back side of the forked slide I, to move it endwise forward, and permit it to return by stages at the proper times, being drawn back by the spring 6, and by so moving endwise and acting on several levers and their connections, it gives a reciprocating or back and forward motion to the segment near N, and of course a partly revolving and returning motion to its pinion on the mandrel M, which has at this end a spherical pivot, *which* its suitable box under *y*, and from the axis of the segment N a lever extends backward to the connection J which joins to the lever K, which is an arm in the crank-like shaft L, which gives a swinging motion to the socket arm *l*, and to the wrist or thimble like box O, which is made so that it may swivel a little, and may be raised or lowered a little in the socket in the arm, by the screw *e*, and holden where it is set by its binding screw, and in this thimble box the neck of the mandrel is hung, and thereby made to swing to and from the tongs or dies at the proper times, and permitted also to slip endwise, and to swivel as the several operations require; the compounded motions of this mandrel and the means by which they are communicated from the cam G by the slide I are shown and made still plainer by sectional Fig. 3, in which the same letters refer to the same parts.

There is a cam like projection on the backside of G which is not seen in the drawings, which moves the lever in which is the Globouse box at Y; this lever turns on the fulcrum P, and only slides the mandrel endwise at the proper times, that is, forward just before the nipper jaw embraces the wire, and backward by the spring marked cS, when the last bow of the link has been bent, as before described.

Fig. 2 is a sectional drawing of the tongs, to show more plainly their movements, parts, and operations: and is a cutting vertically through between their jaws and legs, and through the fulcrum pin *p*, on
160 which they act; the line from *o* to *o* is the level of the top of the frame of the machine; *x* is a section of the sliding bed to which the tongs and their appendages are attached; *g* is a section of a friction block fastened to the bed, against which the cam D acts to move the tongs and bed; T_2 shows one leg and *t* shows one jaw of the tongs, with one die, *d*, fastened to the jaw, and as embracing the stud-pin at *i*; *a* is a section of the plate through which the stud pin *i i* acts, being protruded through and above the face of it, while the first bow of a

link is being bent around the stud by the dies, and retracted or withdrawn into the plate before the dies, with the bow in them can recede as before indicated. Fig. 4 represents a stud or stud-pin with its recess, and the last bow of a link in the recess, and the dotted lines from W to W show how a length of wire is fed in and thrust through the last preceding bow, and ready to be bent into the first bow of the succeeding link; and so continuously interlocking the links, as before described.

Fig. 5 shows a central bisection of the mandrel M, with its central stud or pin, *p*, with its deep flute or channel, *r*, and its spherical pivot, *y*, and its small slide, *s*, the end of which acts like a wedge to raise the shank *n* of the nipper or plyer jaw N, causing it to gripe the wire against the stud *p*, and causing it to relax and open the jaw when moved in the contrary direction; this slide is moved endwise by the slipping collar or pulley with shields *e e* and *o o*, shows the section of the thimble box in which the neck of the mandrel may revolve, and by which it may be moved laterally and through which it may slip endwise, &c., as before described.

We have not given any scale of dimensions, though we may say generally that the drawing is about one-third the length and one-third of the breadth of an ordinary frame, and the other parts nearly proportional; but we must leave the dimensions mostly in the direction
161 of the machinist, because they should vary according to the size of wire and of the chain intended, but the parts should be made fully strong enough.

We have now herein described the whole of our machine, and each part, as exactly and particularly as is sufficient to enable any person skilled in like machinery to build and use it; but we do not claim as our invention all the separate parts, because several of them have been known and used heretofore in other analogous combinations of machinery for other purposes, viz: The like feeding apparatus and movement have been used to feed in wire by length for pins, for card teeth, and for hooks and eyes, and other like purposes, the wheel like cutter and its movements have also been used for purposes like those aforesaid, and we do not claim them, neither do we claim any particular form of cams, nor any particular and separate motions obtained by them, nor any combination of them for other purposes, except only the peculiar adaptation of them by which we produce the successive and consecutive operations needful to bend and interlock the wire links of what is known as jack chain by one process through the machine as hereinafter claimed; several parts of the machine may be moved and actuated by other mechanical devices, producing similar motions and results, but we prefer to use the series of cams for this purpose, combined and arranged as we have described or in any other manner substantially the same.

What we do claim as our invention, and desire to have secured to us by letters patent is the combination of the parts, movements, and operations in one machine, which are required to make jack chains by one process from the straight wire, after it is cut off in suitable lengths, to finished chain, substantially as described. We also claim particularly the stud-pin with a recess in it, substantially as herein described; that is, the use of it as a mandrel around which the bow of the link is bent,
while the bow of another link is held in the recess, thereby form-
162 ing a continuous chain, and irrespective of the mechanical devices by which it is moved or used.

We also further claim the partly revolving mandrel, with its stud and

nipper and other appendages, for bending the last bow of each link, substantially as combined and used in our machine, and constituting part of it.

CHARLES ATWOOD.
GEO. KELLOGG.

Witnesses:
SULLIVAN M. COLBURN.
JOHN B. KELLOGG.

164 Circuit court of the United States for the southern district of New York.

WILLIAM WICKE
vs.
HENRY P. OSTRUM.

BLATCHFORD, J.:

The proofs do not satisfactorily establish that the defendant has infringed any one of the claims of the plaintiff's patent. The bill must therefore be dismissed with costs.

A. V. Briesen for the plaintiff.
N. A. Calkins for the defendant.

(Endorsed:) Circuit court of the United States for the southern district of New York. William Wicke vs. Henry P. Ostrum. Decision. May 6, 1878. U. S. circuit court. Filed May 6, 1878. John I. Davenport, clerk.

165 *Decree in equity.*

At a stated term of the circuit court of the United States for the southern district of New York, held at the city of New York, on the 17th day of May, 1878.

Present, the honorable Samuel Blatchford, circuit judge.

WILLIAM WICKE, COMPLAINANT,
against
HENRY P. OSTRUM, DEFENDANT.

This cause having been brought on to be heard upon the pleadings, proofs, and exhibits of the respective parties herein, and the court having heard A. V. Briesen, of counsel for the complainant, and N. A. Calkins, of counsel for the defendant, it is ordered, adjudged, and decreed, that the bill of complaint be, and the same hereby is dis-
166 missed, and that the said Henry P. Ostrum do recover of the said complainant, William Wicke, his costs and disbursements of this suit, to be taxed according to the course and practice of this court, and that he have execution therefor.

SAM'L BLATCHFORD.

(Endorsed:) U. S. circuit court, southern dist. of New York. In equity. William Wicke, compl't, vs. Henry P. Ostrum, def't. Decree dismissing bill, &c. N. A. Calkins, sol'r & of counsel for def't, 305 Broadway, New York City. U. S. circuit court. Filed May 17, 1878. John I. Davenport, clerk.

167 Supreme Court of the United States.

WILLIAM WICKE, APPELLANT,
vs.
HENRY P. OSTRUM, APPELLEE.

To the honorable the Supreme Court of the United States:

The appeal of William Wicke, the above named complainant and appellant, respectfully showeth.

That upon the first day of March, 1876, the above named complainant filed his bill in the circuit court of the United States for the southern district of New York against the above named defendant and appellee, for the infringement by said defendant of complainant's letters patent of the United States No. 38924, dated June 16, 1863, for an
168 improved machine for making boxes, showing the issuing of said letters patent on that day to George Wicke and the subsequent assignment by said patentee of all his right in said letters patent to William Wicke, this complainant, and the infringement thereof by the said defendant, and praying that the said defendant be restrained and enjoined from such infringement and be compelled to account for and pay to the complainant the gains and profits received by the defendant from such infringement and the damages sustained by the complainant therefrom, to which bill the said defendant made answer filed May 1, 1876, denying that the defendant infringed the complainant's letters patent, and the complainant filed his replication to said answer
169 May 13, 1876, and both parties took proofs in said suit, and the said suit was brought on for final hearing before the said circuit court in the October term, 1877, upon the pleadings and proofs therein, whereupon the said court, on such hearing, decided that said defendant did not infringe the complainant's patent, and decreed that said bill be dismissed with costs to the defendant. That on the 17 day of May, 1878, a final decree was made and pronounced in the cause, wherein it was in substance adjudged and decreed that the said bill of complaint be dismissed with costs to the defendant to be taxed.

Wherefore this appellant appeals from the whole of said decree of said circuit court of the United States, and respectfully prays that the
170 decree of the said circuit court, and the bill, answer, pleadings, depositions, evidence, and proceedings in the said cause may be sent to the Supreme Court of the United States without delay, and that the said Supreme Court will proceed to hear said cause anew, and that the said decree of the circuit court and every part thereof may be reversed and a decree made adjudging that the defendant has infringed the complainant's letters patent, and granting the relief prayed for in said bill with costs, or such other decree as to the said Supreme Court shall seem just.

Dated New York, May 29, 1878.

WILLIAM WICKE.

(Endorsed:) Supreme Court of the U. S. William Wicke, ap-
171 pellant, vs. Henry P. Ostrum, appellee. Petition on appeal. Allowed May 31st, 1878. Sam'l Blatchford, C. J. A. V. Briesen, compl't's sol'r, 258 Broadway, N. Y. U. S. circuit court. Filed June 2, 1878. John I. Davenport, clerk.

Due service of a copy of the within paper admitted this 3d day of June, 1878.

N. A. CALKINS,
Sol. for Def't.

172 *Bond for costs.*

Circuit court of the United States of America for the southern district of New York, in the second circuit.

WILLIAM WICKE
vs.
HENRY P. OSTRUM.

Know all men by these presents that we, William Wicke, of 155 Goerck street, city of New York, county and State of New York, and August Roester, of No. 200 Keap street, Brooklyn, New York, and Theodore Schumacher, of No. 46 St. Mark's Place, in said city of New York, are held and firmly bound unto the above named Henry P. Ostrum, of New Haven, Conn., in the sum of six hundred dollars, to be paid to the said Henry P. Ostrum, for the payment of which well and truly to be made we bind ourselves, and each of us, our and each of our heirs, executors, and administrators, jointly and severally, firmly by these presents, sealed with our seals, and dated the 29th day of May, in the year of our Lord one thousand eight hundred and seventy-eight.

Whereas the above named William Wicke has prosecuted an appeal to the Supreme Court of the United States, to reverse the decree rendered in the above entitled suit by the judge of the circuit court of the United States for the southern district of New York:

Now, therefore, the condition of this obligation is such, that if the above named William Wicke shall prosecute his said appeal to effect and answer all damages and costs, if he shall fail to make his plea good, then this obligation shall be void, otherwise the same shall be and remain in full force and virtue.

WILLIAM WICKE.
AUGUST ROESTER.
T. SCHUMACHER.

Sealed and delivered and taken and acknowledged this 29th day of May, 1878, before me.

JOHN A. SHIELDS,
U. S. Commissioner S. D. of N. Y.

173 UNITED STATES OF AMERICA,
Southern District of New York, ss:

August Roester and Theodore Schumacher, being severally duly sworn, do depose and say, and each for himself saith, that he is worth the sum of six hundred dollars, over and above all his just debts and liabilities.

AUGUST ROESTER.
TH. SCHUMACHER.

Sworn to this 29th day of May, A. D. 1878, before me.

JOHN A. SHIELDS,
U. S. Commissioner S. D. of N. Y.

The foregoing bond is approved. May 31, 1878.

SAM'L BLATCHFORD, *C. J.*

(Indorsed:) Vol. , page . U. S. circuit court. William Wicke vs. Henry P. Ostrum. Bond for costs on . U. S. circuit court. Filed May 31, 1878. John I. Davenport, clerk.

174 Circuit court of the United States, southern district of New York, in equity.

WILLIAM WICKE
vs.
HENRY P. OSTRUM.

By the honorable Samuel Blatchford, one of the judges of the circuit court of the United States for the southern district of New York.

To Henry P. Ostrum:

Whereas William Wicke has lately appealed to the Supreme Court of the United States from a decree lately rendered in the circuit court of the United States for the southern district of New York, made in favor of you, the said Henry P. Ostrum, and has filed the security required by law: You are therefore hereby cited to appear before the said
175 Supreme Court at the city of Washington, on the second Monday of October, 1878, to do and receive what may appertain to justice to be done in the premises.

Given under my hand at the city of New York, in the southern district of New York, in the second circuit, the thirty-first day of May, in the year of our Lord one thousand eight hundred and seventy-eight.

SAM'L BLATCHFORD.

(Endorsed:) U. S. circuit court southern district of New York. William Wicke v. Henry P. Ostrum. Citation. A. V. Briesen, compl't's sol'r, 258 Broadway, N. Y. U. S. circuit court. Filed June 3d, 1878. John I. Davenport, clerk.

Due service of a copy of the within paper admitted this 3d day of June, 1878.

N. A. CALKINS.
Sol. for Def't.

176 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, John I. Davenport, clerk of the circuit court of the United States of America for the southern district of New York, in the second circuit, do hereby certify that the foregoing pages, numbered from one to 175, inclusive, contain a true and complete transcript of the record and proceedings had in said court in the case of William Wicke, appellant, against Henry P. Ostrum, appellee, as the same remain of record and on file in said office.

In testimony whereof I have caused the seal of the said court to be hereunto affixed, at the city of New York, in the southern district of New York, in the second circuit, this 26th day of June, in the year of our Lord one thousand eight hundred and seventy-eight and of the Independence of the said United States the one hundred and second.

[SEAL.] JOHN I. DAVENPORT, *Clerk.*

(Indorsement on cover:) No. 437. William Wicke, appellant, vs. Henry P. Ostrum. S. New York, C. C. U. S. Filed 1st July, 1878.

Supreme Court of the United States.

OCTOBER TERM 1880. No. 165.

WILLIAM WICKE,
Appellant.
vs.
HENRY P. OSTRUM.

Appeal from the Circuit Court of the United States for the Southern District of New York.

BRIEF FOR APPELLANT.

ARTHUR v. BRIESEN,
Of Counsel for Appellant,
No. 229 Broadway,
NEW YORK CITY.

NEW YORK,
G. LAUTER, STEAM PRINTER, 64, 66 & 68 ANN ST., COR. WILLIAM.
1880.

Supreme Court of the United States.

OCTOBER TERM, 1880.—No. 165.

WILLIAM WICKE, *Appellant.*

vs.

HENRY P. OSTRUM.

Appeal from the Circuit Court of the United States. For the Southern District of New York.

ARGUMENT FOR THE APPELLANT.

STATEMENT OF THE CASE.

On the 16th day of June, 1863, one George Wicke obtained a patent for an improved machine for nailing boxes. The patent is numbered 38,924, and for infringement of the same this suit is brought. The defendant makes machines for nailing boxes which his answer admits are made under a certain patent granted to said defendant in 1876. The amendment to the answer printed on the lower part of page 9 of the record sets up that the machines which the defendant makes, uses and sells are substantially such as are specified and claimed in said Ostrum's said patent. A copy of the Wicke patent will be found on pages 78 and 79 of the record, and a copy of the Ostrum patent on pages 80 to 82 of the record.

For the information of the Court two models have been made; one, complainant's Exhibit No. 5, which represents the complainant's patented machine, and one, complainant's Exhibit No. 4, which represents the defendant's patented machine.

The record shows that the defendant's machine, as actually made and sold by him, has in addition to the features which Exhibit No. 4 represents certain slides which are represented on page 15 of the record in the illustration of the defendant's machine, and marked *a* and *b*. The object of these slides *a* and *b* will be made clear in the subsequent part of this brief.

THE COMPLAINANT'S PATENT.

Before George Wicke invented his machine, the process of nailing to be carried on by hand. His is the first machine for driving a nail machinery. He solved the problem of substituting machinery for the ers that hold the nail before the hammer strikes it, for the arm that ries and swings the hammer, and for the hammer itself; and when we mine his machine it seems, as it always does when a truly great inven-

tion has been made, that the simplicity of the parts is such that really very little invention was necessary for a nailing machine. For the fingers that hold the nail the inventor substitutes a springing jaw composed of two grooved fingers, between which the nail is inserted and by which it is held until the hammer strikes it. For the hammer he substitutes a reciprocating plunger or we might say an iron finger which by the action of a cam shaft is pushed between the jaws against the head of the nail, forcing the latter into the boards which are to be nailed together. This finger or plunger is arrested in its movement as soon as the head of the nail has been made flush with the surface of the board. These simple elements constitute the foundation of the Wicke patent. In addition there was, of course, mechanism for moving the plunger and nail, and for afterwards withdrawing the plunger so as to leave the jaws free for the reception of a new nail, and there was also a table for supporting the boards to be nailed together; and this table, the inventor found it necessary to make adjustable so that the plunger could drive a nail into a (vertically) short board as well as into a (vertically) long board. In the former case the table is moved nearer to the jaws than in the latter case. Inasmuch as the nailing of boxes by machinery is particularly profitable if many boxes of the same size are nailed in succession, it was also desirable to provide the machine with a gauge regulating the position of the boards laterally, and for insuring an equal distance from the end of the box, of the nail driven into the same. Having thus invented the cardinal features of the machine, it readily occurred to the patentee that these features could be multiplied in such a way as to permit the driving of more than one nail simultaneously; and the nailing of one board of a box to another board at one single operation by as many nails as appeared necessary for properly holding the two boards together. To this end the patentee provided his machine with a series of nail holding jaws and a series of nail driving plungers, and he made them adjustable with reference to each other so that the distance between any two nails driven by the machine could be suitably regulated, yet all the plungers should be driven down by one turn of the same shaft. In order to make this multiplication of plungers and jaws practicable, and also the adjustment of the distances between them, the said jaws were attached to sliding pieces, which, in the specification of the patent are called the carriages F., and these carriages F. are made laterally adjustable so that whenever a carriage F. was moved sideways, nearer to or further away from another carriage F. on the same machine, it carried with it its pair of jaws, and also its plunger; all of which will more readily appear from an inspection of the complainant's patent.

The defendant, it is here charged, has taken the complainant's machine in toto, but has placed it into a horizontal position, whereas the complainant's machine is shown in the patent to operate vertically, or in other words, the complainant's machine drives the nail downward in a vertical direction, and defendant's machine drives it forward, in a horizontal direction. By putting the complainant's machine into the horizontal position the spring of the nail receiving jaws can be readily omitted as the weight of the nail will take its place and keep the nail stationery in the hollow of half the jaw until the plunger shoves the nail into the wood.

The question submitted to the Court is whether the defendant, by thus placing the complainant's patented machine into a horizontal position and substituting for the double spring jaw, a single half jaw, is or is not an infringer of the complainant's patent.

Mr. William Wicke, the present owner of the Wicke patent, whose title to the same is admitted, (see fol. 40, page 14 of the record,) ascertained in February, 1876, that the defendant was infringing upon his patent, and on the 18th day of February caused to be written to the defendant the letter, complainant's Exhibit No. 8 which is printed on page 25 of the record. To this letter one George Terry, who styles himself a "counsellor in patent cases," and who afterwards became an expert witness in this case, replies that the machines made and sold by Mr. Ostrum and recently patented by him, in no particular infringe Wicke's patent "with its badly drawn claims." Suit was then brought and in the answer, as already stated, the defendant sets up his patent of January 25th, 1876, and admits that the machines which he makes are made in substantial correspondence with said patent.

The complainant, in opening his case, introduced first the circular, Exhibit No. 3, (page 15 of the record) which the defendant's counsel admits, (Top of page 15) advertises "the defendant's machine here in controversy."

Afterwards the model, Exhibit No. 4 which is a certified model of the Ostrum machine, is also offered in evidence, see lower part of page 16 of the record. Mr. Wicke, the complainant, is called, and testifies that he has seen one of the defendant's machines, and that in addition to the features embodied in the patent of Ostrum which the answer admits defendant employed in the said machine, it also had on the upper cross bars, the sliding pieces *a* and *b* which serve the purpose of gauges for placing the edges of the boards even, while they are being nailed together. (See Wicke's testimony, pages 14—17 of the record.) An expert witness is then called on behalf of the complainant, and testifies on comparing the defendant's machine with the complainant's patent, that he does not find any difference, of a substantial character, between the defendant's machine and the complainant's patented machine. In this testimony he first analized the complainant's patent, (see his answer to question 5, page 18 of record.) and then compares it with the defendant's machine, Exhibit No. 4, giving the result of the comparison. He finds that in defendant's machine, grooved horizontal guides are substituted for the grooved vertical guides of complainant's patented machine, and that where the complainant's vertical guides are made in shape of spring jaws, the horizontal guides are open grooved channels, but he finds that the operation of the two devices, viz. the grooved guides and the reciprocating plungers, is the same in both machines, and the nails are placed into the grooves, pushed out of the grooves by the plungers, and driven into the articles to be nailed in the same manner in each machine. This expert clearly comes to the conclusion that placing the Wicke machine into a horizontal position, which is all the defendant has done, and ripping off the then superfluous half of the jaw, is the use of a certain species of mechanical skill, but not a departure from the invention which the complainant's patent discloses to the public. He finds (see answers 14 and 15, page 21) that complainant's machine is as fully capable of use in a horizontal position as it is of use in a vertical position, whereas the defendant's position is limited to the horizontal position as long as the other half of the spring jaw is not put on. The vertical position, however, according to this expert, and also according to Mr. Almond, the second mechanical expert of the complainant is far superior, because the operator in the vertical machine can see the nail entering the wood and can stop the operation of the machine if the nail should be faulty or not enter in the proper direction, whereas, in the horizontal machine the up-

right board which is being nailed is necessarily placed between the eyes of the operator and the plungers, so that the operator cannot see any defect in the nails that are being driven or in their position. (See answers 18 and 19, page 22 of the witness Faber Du Faur. See also answers 18—23 of witness Almond on page 29 of the record; answer 34 of the same witness, page 31; answer 63, page 35, and answer 65 and 66, page 36.)

Mr. Almond has seen the two machines in operation, the Wicke machine and the Ostrum machine, and he testifies on this point as follows, in answer to question 66, p. 36:

"*I assume that the position in which the machine is placed is immaterial. If it be worked in a vertical position very good results would follow. If it be inclined somewhat, the same results will follow, with the exception that it will be necessary to modify some of the working parts, such as the treadle, and if brought entirely to the horizontal position the funnels for feeding the nails, and the use of one-half of the spring jaws or nail-guide becomes unnecessary. In this position I found the Wicke machine in the shape of Ostrum's modification.*"

The defendant sought to meet this expert proof by the testimony of two experts, one, Mr. Terry, the "counsellor in patent cases" above referred to, who derives his title as he testifies, from the fact that he is "an American citizen and has the right to give counsel in any case he sees fit." See his answers to questions 21 and 22, page 57, and the other Mr. W. C. Hicks, whose testimony will be found on pages 65—76 of the record. Both these defendant's experts attack the complainant's patent principally because, in their opinion it is not artistically drawn. Thus Mr. Terry, though admitting that George Wicke invented new means of accomplishing an old result, (to wit, the result of driving a nail into wood) and that he invented new combinations, which are shown in his patent, holds that these new combinations are not properly claimed. (See his answer to question 52, page 61 of the record) and that the patent is vague and indefinite in certain respects which he defines and mentions at large in his answer to question 53, as follows:

Q. 53. *Will you please point out in the complainant's Patent each and singular the expressions which you have termed vague and indefinite?*

A. I will: the first expressions that I find is "proper moment;" "any further than necessary" is the next; "any further than desirable," "proper places;" now as the patentee has not been pleased to advise us when the "proper moment" is, or how far "any further than necessary" is, or how far "any further than desirable" is, or what the "proper places" are, we are just as much in the dark as to these particulars, as though he had not said a single word about it.

He admits nevertheless, answer 55, that every person can understand the patent and the invention there described. Mr. Hicks also thinks that the language of the claims of the patent is inartistic, and makes this his principal ground of assailing the patent. But when the Court comes to read Mr. Hicks description of the defendant's machine as given in his answer to question 9, page 68 of the record, it will find it to be a complete description of complainant's patented machine with this only distinction that wherever the defendant's expert used the word "horizontal" in describing the position of the Ostrum machine, the term

"vertical" should be applied in order to make his answer 9 a description of the Wicke machine.

ASSIGNMENT OF ERRORS.

The Court below erred on the following grounds:

1st. In finding that the defendant has not infringed the claims of the complainant's patent, and that the proofs do not disclose such infringement.

BRIEF.

The claims of complainant's patent which are in controversy are the 1st, 2d, 4th and 5th claims. These are in the following words:

1st. The employment of the grooved spring jaws H., substantially as described, for the purpose of receiving the nails, and to guide them to their proper places.

2d. The combination with the spring jaws H. of the rising and falling plungers E., constructing and operating substantially as and for the purpose described.

4th. The arrangement of the circular portion *e. f.* on the cam C., to operate in combination with the gate B. and treadle *d.*, substantially as and for the purpose set forth.

5th. The arrangement and combination of one or more adjustable carriages F., table J. and slide L., constructed and operating in the manner and for the purpose substantially as specified.

All of these claims excepting the first are combination claims. The first is for "the employment" of a new device, namely the employment of the grooved spring jaws H., for the purpose of receiving the nails, and to guide them to their proper places.

The words "the employment substantially as described" in this claim seek to connect the jaws evidently with the machine on which the jaws are employed, otherwise the claim would be broadly for the use of spring jaws which would be senseless.

The Court will undoubtedly seek to construe the claim, so as to give it a meaning such as appears reasonably within the terms of the patent. Spring jaws in and by themselves are old and are used in a great many varieties of machines. Every spring vice, every spring tongs, has spring jaws, but they are not employed substantially as described in complainant's patent.

The second claim is for the combination of these spring jaws with the plunger, and the fourth claim is for the combination of the cam which moves the plunger by turning in a certain gate or slide with the treadle substantially as set forth.

The fifth claim is for the combination of the carriages which are adjustable laterally, and which carry the jaws and plungers with the table, and with the slide L, which is the gauge for properly setting the boards of the table.

As to the first and second claims the Court below seems to have taken the ground, that they are both limited to the use of spring jaws as necessary elements. Now, even if it be admitted, that as far as the first claim is concerned, the patentee cannot invoke the doctrine of equivalents as against an infringer, an admission, which, if made, is not based upon what this Court says on this point, in the cause of Imhaeuser vs. Buerk, 101, U. S. Reports, page 655 and 656, yet it is clear, not only from that opinion, but from every opinion of this Court, which touches upon the question of equivalents, that as far as the second claim is concerned, it must receive a construction which will cover the combination of the spring jaws *or their equivalents* with the plungers, and it is for the Court here to decide whether or not the defendant has placed equivalents of the spring jaws into his machine. If he has, then the decree rendered by the Court below must be reversed. The said decree can only be maintained upon the assumption that the defendant does not use equivalents of the spring jaws that are claimed in the combination of the second claim. A mere matter-of-fact comparison of the two devices in controversy seems to leave no doubt but that the mere taking away of one of the halves of each jaw leaves on the machine that which was known at the time of the patent as capable of taking the place of the whole double jaw. Or, in other words, if we take the complainant's machine, and place it in a horizontal position, we see at once, that the upper half of the spring jaw may now be omitted or taken away. The lower half now does all the service needed, assisted by the gravity of the nail. The pressure in the one case is produced by a spring, and in the other case by gravity, and as the Court held in Imhaeuser vs. Buerk on this very point, see page 656, where pressure is produced by a spring in one machine, and by a weight in another machine, *one is the mechanical equivalent of the other.* In describing the defendant's machine, the complainant's expert finds as follows: (See answer to question 13, page 20.)

"*I find in the model, Exhibit No. 4, grooved guides, which retain the nails and guide them to the proper places. The guides do not enclose the nails all around, because the machine is placed in a horizontal position, in which position it is not necessary to prevent the nail from falling out. The grooved guides are parallel to the plungers, and the nails are pushed out of those grooved guides by the plungers. I consider those grooved guides substantially the same as the grooved guides described in complainant's patent, and referred to in the first claim thereof, where they are called grooved spring jaws, with the exception that those parts of the grooved jaws, which, in consequence of the altered position of the machine, Exhibit No. 4, become unnecessary, are omitted, while the principal parts, grooves for holding and guiding, are retained. I also find in the model, Exhibit No. 4, a combination of grooved guides and reciprocating plungers, constructed and operating substantially as and for the purpose described in complainant's patent referred to in the second claim thereof. I have already stated, that the grooved guides or jaws are substantially the same as the grooved spring jaws referred to in the patent, with the exception of those parts which become unnecessary in consequence of the horizontal position of the machine. The reciprocating plungers are substantially the same as the rising and falling plungers in complainant's patent. By placing the vertical machine in a horizontal position, the rising and falling plungers become horizontal reciprocating plungers without altering the character of the machine or the result produced. The*

operation of the two devices, viz. the grooved guides and the reciprocating plungers, is the same in both machines. The nails are placed into the grooves, pushed out of the grooves by the plunger, and driven into the articles nailed."

On the same question read also the testimony of the same expert, answer 22 and 23, page 22; answer 27 and 28, page 23, and answers 32 and 35, page 24 of the record. As to the application of the rule of equivalents to the present cause, the following decisions are respectfully referred to:

Imhaeuser vs. Buerk, 101, U. S., page 655.

Burr vs. Duryee, 1, Wallace, page 531.

Seymour vs. Osborne, 11, Wallace, page 516.

Gould vs. Rees, 15, Wallace, page 187.

On the same point the testimony of Mr. Almond, in answer to question 48, page 33, where he describes the Ostrum grooved guide as an inferior substitute for the Wicke spring jaw, and the testimony of the defendant's witness Terry, in answer to questions 69 and 70, page 63, as compared with his answer to question 52, page 61, is referred to.

That the witness Terry could not agree that the defendant's grooved guide is the equivalent of complainant's spring jaws, seems astonishing, when we ascertain what he understands as an equivalent. The rule as to that is laid down by him in the following words: (See his answers to questions 72—74, page 64.) "I believe that the elements claimed in the "patent, cover the mechanical equivalents of such elements as were "known at the date of the patent as mechanical equivalents."

The fourth claim is for a mechanism by which the plungers receive their reciprocating motion. This mechanism consists of a cam, operating in combination with a gate B, and with a treadle. The peculiarity required of this mechanism is that it should drive the plunger, and with it the nail, home by one continuous stroke, and at the same time that it should arrest the forward movement of the plunger and nail at the moment the nail has been driven sufficiently far into the wood, wherever that be. To this end the cam is made with a circular portion which prevents the gate which pushes the plungers, from being depressed further than necessary, or in other words, following the language of the specification:

"*The cam C, on being turned in the direction of the arrow marked on it in figure 2, depresses the gate B, until the circular portion e, f, bears upon the gate. This portion of the cam is made to form part of a circle described from the centre of the shaft D, so that the cam may be turned more or less without depressing the gate further than desirable. The gate B, acts on one or more plungers E, each of which moves up and down in a carriage F, and a spring has a tendency to raise the plunger after the same has been depressed, or to keep it up when not exposed to the action of any power.*"

As to the gate B, defendant's expert Hicks admits, on top of page 71, as follows:

"*There is what may be called an equivalent for the gate in the Ostrum machine.*"

Of course there is, for there is that mechanism which answers the purpose of imparting movement to one or more plungers in a rectilinear direction, and which derives its movement from an oscillating cam in both machines.

Mr. Faber Du Faur, in connection with this matter, having special reference to the fourth claim, testifies as follows: (See answer to question 13, page 21, of the Record.)

I also find in Exhibit No. 4, the mechanical equivalent of the combination of the cam, gate, and treadle, for the purpose of producing reciprocating motion of the plungers, as specified in the fourth claim of complainant's patent, with the exception of the circular portion, e, f, which allows the cam to be turned more or less, without depressing the gate any further than desirable. This part is in Exhibit No. 4, replaced by a positive stop arrangement, frequently used in machinery, to limit motion in a certain direction, and which I also consider a mechanical equivalent of the circular portion, e, f, as it accomplishes the same object by well-known mechanical means, without altering the character of the machine, or the result produced.

If this witness is correct, and no testimony has been given to contradict him, the fourth claim is clearly infringed. The only testimony given by the defence on this point, is that of two witnesses who are not mentioned in the answer, to wit: The witness Kelsey and the witness Hyde, whose testimony will be found on pages 45 and 46 of the record, and also so much of the testimony of the witness Terry, as refers to the patent of Atwood and Kellogg, for a chain making machine, of which a description is printed on pages 84—88 of the record. As to this Kellogg machine, which, by the way, was not set up in the answer, nor in any authorized amendment thereof, the defendant's expert Terry, and "Counsellor in patent cases," testifies as follows: (See answer to question 14, page 56, of the record.

"Have you examined letters patent, No. 7768, dated November 12, 1850, granted to Charles Atwood and George Kellogg for a machine for making jack chains, and do you understand the construction, operation, and functions of cam D, as shown in figure 2," to which his reply is: "I have *looked* at such patent, but *do not pretend to understand the machine in all its parts*, and have looked at it solely to ascertain whether it contained a cam with a circular portion, performing the same function substantially as the cam claimed in the fourth claim of the patent to George Wicke, and I find that it does perform substantially the same function and is substantially the same element." And the witnesses Kelsey and Hyde say, that they have seen cams with circular portions, for a long time, for many years. With this proof the defense seemed satisfied. But the fourth claim is not a claim for any new element. The complainant does not pretend that a cam C, with its circular portion *e, f*, is a new element, a new form of cam; he admits for the purpose of this argument, as every mechanic would have to admit, at the present advanced stage of mechanical development, that such cams are frequently used, and he simply claims the novel combination produced by him, of a cam for imparting reciprocating motion to a gate, with a treadle which turns the cam, and with that added to the cam, which will arrest the motion of the gate whenever desired.

The Court is requested to take into consideration the fact, that frequently one such nailing machine may be used for driving long nails, and

as frequently for driving short nails. If a long nail is to be driven, the gate must receive a greater length of motion by means of the cam, and if a short nail is to be driven, the gate must not be moved as far down, otherwise the plunger would follow the short nail into the very depths of the wood, to make up for the deficiency of the length of the nail as compared with a longer nail; and the patentee Wicke, forseeing this, provided his machine with means for arresting the movement and preventing the gate from being depressed "any further than desirable." By setting the cam on the shaft D, at the requisite angle, it is made so that the portion *e, f*, which really presses the gate down, will, with reference to a uniform treadle movement, nevertheless give a longer or shorter stroke to the gate. It is this adjustment which the claim seeks to cover, or rather this faculty of the machine for being adjusted to prevent the gate from moving down further than desirable. In lieu of this, Ostrum uses adjustable collars or stops, as testified to by Mr. Faber Du Faur, in the answer above quoted; and inasmuch as Ostrum uses the combination of the treadle with a gate and with a cam, and with that which, as Du Faur states, is well known as an equivalent for the portion *e, f*, of the cam, to wit: that which will prevent the gate from being moved too far by the cam, the defendant's machine clearly infringes the fourth claim.

As to the fifth claim, the charge of infringement seems to have been established beyond doubt. It seeks to cover the combination of the adjustable table with the laterally adjustable carriages, that carry the nail-guides and the plungers, and with the laterally adjustable slide L. The table, which is one of the elements of this claim, is used as a support for one of the boards to be nailed. This board is placed upon the table beneath the plungers, and upon this board is laid at right angles, the other board, and the ends of the two boards which are thus put together, are made to abutt against the slide L, so that one pair of boards will always be put into the same relative position upon the machine, as any other pair of boards, as long as the slide L remains unmoved. The carriages F, are described in the patent as follows:

"The carriage F, slides in a lateral direction on ways G, and it is adjusted at the proper point, where the nail is to be driven by set screws *h*. The gate acts on one or more plungers E, each of which moves up and down in a carriage F."

Upon examining defendant's machine we find that it has the adjustable table in shape of an adjustable cross bar, against which the wood to be nailed is placed. Put the defendant's machine in a vertical position, and the appellation of "table" becomes proper for said movable cross-bar. In both machines, this table, or movable plate or bar, can be set nearer to or further away from the ends of the plungers, so as to permit of the nailing of higher or lower boxes. In both machines are the carriages F. F. In both machines these carriages are made adjustable and in both is used the slide L or its equivalent.

The slide L is a stop, as already stated, for receiving the ends of the boards to be nailed together. If this stop is fixed and used in combination with an adjustable carriage the same object is evidently obtained, as though the carriage were fixed and the said stop made movable.

Complainant's patent provides for the adjustment of both carriage and stop. Defendant's machine *as shown in his patent*, has the adjustable carriage, but a fixed stop such as Mr. Hicks describes in lines 9—16, page 69 of the record. But the machine which the defendant *sells* and which he advertises in his circular and as to which Mr. Wicke has testified has, in addition to these fixed stops the movable stops *a* and *b* which

take the place directly not only of the single slide L described in the Wicke patent, but of two of these slides, having one at each end of a box to be nailed.

The testimony as to the infringement of the fifth claim seems to be conclusive, and in regard to it, the testimony of Mr. Wicke on pages 16 and 17 of the record, and that of Mr. Faber Du Faur in answer to question 13, page 21 is respectfully referred to. His testimouy is as follows:

"*I also find in Exhibit No. 4, taking into consideration the statements in regard to the adjustable slides, a series of adjustable carriages, a table, and an abutment, and also a slide, the whole constructed, and operating substantially in the manner, and for the purpose specified in the complainant's patent, and referred to in the fifth claim thereof. The adjustable carriages in Exhibit No. 4, hold the plungers, and allow their adjustment at different distances, as in the complainant's patent. The transverse bar on the top of the table in Exhibit No. 4, which in Ostrum's patent is called the rest B, is an adjustable abutment, which receives the thrust of the plungers, and prevents the boards from yielding while the nails are being driven by the plungers. It is adjusted by screw motion, and I consider it substantially the same as the table J in complainant's patent, and referred to in the fifth claim thereof, operating in the same manner, and producing the same result. The machine, Exhibit No. 4, being in a horizontal position, the face of the abutment necessarily is vertical, while, as shown in complainant's patent, it is horizontal.*

The slide referred to in the question is substantially the same as the slide L, shown and described in complainant's patent, and referred to in the fifth claim thereof.

In conclusion, I would state that I do consider the organization of the machine in Exhibit 4, substantially the same as the organization of the machine shown and described in complainant's patent—producing the same results by substantially the same means.

Q. 14. *Do you find in complainant's patented machine, anything that would prevent its use in a horizontal position?*

A. I do not.

The defendant's testimony with reference to claim 5 is as follows:

Mr. Terry says, (see bottom page 55) "I will also say that the fifth claim in the patent to George Wicke is a claim for a combination of aggregate results or an aggregation of results, and is not a claim for a patentable combination."

This gentleman decides the question on the spot. It is for the Court to judge, methinks, whether the combination claimed in the fifth claim is such a combination as ought to be sustained by a Court, is such a combination as will be looked upon with favor by a Court in a chancery suit.

Now if Mr. Terry were right, that the claim is for mere adjustment, and for mere aggregation, and not for a combination, the claim, probably, would be void. But let us see whether that is so. The claim purports to be for a combination of three parts in the manner described. These parts are the table, the carriage and the slide L. If the table were not adjustable, the machine would be confined to the nailing of boards having a certain height; if the carriages which carry the plungers were not adjustable the machine would be confined to a certain specific distance between the nails that are driven at any one time and between the end

nails in the end of the boxes. If there were no slide L movable or otherwise the machine would leave an invariable distance between the ends of the board and the nail driven nearest that end, and moreover, the machine would not enable any but the most skillful operator to nail one box of a kind just like any other box of the same kind. All the several features mentioned in the fifth claim combined in one machine in the manner shown in the patent go to make up a perfect nailing machine. Without either, the machine would be less perfect. Therefore, the claim is to the most perfect combination of parts known to the inventor, and, consequently, valid. All these parts contribute to the one result, to the nailing of boxes by continuous movement of the nail in such manner that series of nails may be driven at one time and in such manner again, that the nails driven into one box will be equally spaced, and equally far driven and equidistant from the ends as the nails driven into any other box. But Mr. Hicks, the defendant's other expert, says that the fifth claim is for an inoperative combination. He does not regard it as a claim for an aggregation, he admits that it is for a combination, but he regards it as a claim for an inoperative combination, because, as he says, in answer to question 5 (lower part of page 67 of record) taking the elements mentioned in the claim and arranging them as specified. "*They do not operate at all, they may be constructed as described, but each would act on its own hook, without any possible combination into which the word operation or mode of operation, could enter. But if I placed in the carriage F the plungers and jaws which belong there, I would get a mechanism which would operate; therefore I think I ought to put them in.*"

Well, now, it seems that Mr. Wicke did put them in and Mr. Ostrum, too, and the result was that an operative machine was produced which had the characteristic elements of combination claimed in the fifth claim, to say nothing of the other claims. But if Mr. Hicks' criticism were correct and logical, a person could not in any one patent claim more than one single combination of parts shown in a machine for the same reason that what ever sub-combination had been newly invented would not be operative in itself without adding to it all the other elements that go to make up the perfect machine.

Thus for example, a new shuttle driving mechanism for a sewing machine, would, according to Mr. Hicks' theory, not be claimable in a patent, because the mere act of driving a shuttle back and forth is not sewing, and the patentee ought therefore to put into that combination the needle and the thread carrying devices and the tension apparatus and all that makes up a complete sewing machine. Yet is it not possible to use in two different kinds of sewing machines the same shuttle driving mechanism? It seems that the answer to this question must be in the affirmative and likewise must the question be answered in the affirmative which seeks to ascertain whether the invention of the combination in a box nailing machine of an adjustable table with one or more plunger and jaw carrying carriages, and with the slide L, is not applicable to several nailing machines which otherwise may differ in construction. In both instances, as far as this suit is concerned, the nailing machines are operated by means of a treadle, yet it is nevertheless a fact that many of the Wicke machines are operated by steam, and great modifications have been introduced into these steam operating machines for transmitting the motion of the piston of the steam cylinder to the plunger of the nailing machine, and yet all these steam driven machines have the combina-

tion of the adjustable table with the carriages and with the side stop or slide L, precisely like that which is shown in the Wicke patent and in the Ostrum machine, and which for this very reason of its adaptability in machines that otherwise differ in details of construction is a proper claim, and covers a legitimate combination.

In the same connection the attention of the Court is respectfully invited to the testimony of the witness Almond in answer to the question 122, page 43 : to testimony of Mr. Faber Du Faur, answers 25 and 26, page 23, and answer 34, page 24.

On the question of equivalents, the following authorities are also referred to :

Ives and others vs. Hamilton, 2d Otto, page 426.

This case also disposes of the question raised by the change of position into which the defendant has put his machine as compared with the complainant's machine.

The corn planter case, 23 Wallace, 181.

Mason vs. Graham, 23 Wallace, 261.

In the last mentioned case the defence also sought to limit the foundation patent to a specific form of devices which were shown in that patent, but was properly overruled.

In this connection, I also beg to call the attention of the Court to the statement of Judge Ingersoll in the case of Conover vs. Rapp, 4. Fisher's patent cases, page 61—63. The learned judge says : "If forms were essential, every patent that has been granted could be successfully contested. A mechanical equivalent is a device which performs substantially the same office with the thing described, in substantially the same way. And if this device in defendant's machine performs the same office as in the plaintiff's in substantially the same way, it is an element of combination of the plaintiff's machine." And so the charge of Judge Sprague in Johnson vs. Root, 1 Fisher, 363, compared with the opinion of this honorable Court in Imhaeuser vs. Buerk is, I believe, applicable to the present case. I quote from the charge. "A mechanical equivalent I suppose, as generally understood, is where the one may be adopted instead of the other by a person skilled in the art, from his knowledge of the art. Thus an instrumentality is used in a mechanism : you wish to produce a pressure downwards : it can be done by a spring or it can be done by a weight. A machine is presented to a person conversant with machines ; he sees that the force applied downward in the one before him, is by weight ; from the knowledge of the art he can pass at once to another force, the spring, to press at downward, and those are mechanical equivalents."

It is certainly interesting to see how near the learned Judge came in that charge to the language of this Court in the case last referred to : 101 U. S. reports, page 656, "Pressure in a machine may be produced by a spring or by a weight, and when that is so, the one is a mechanical equivalent of the other."

Applying these dicta to the substitution which is made for the spring jaw of the Wicke machine in the Ostrum machine where the weight of the nail is made the means of holding it in the grooved guide, applying all the dicta of the Courts above referred to to the case at bar, it seems clear that the complainant's position is correct. The more so does this seem to be the case when it is taken into consideration that Wicke swa the first producer of any nailing machine ; his is the foundation patent ;

he is not a mere improver of existing mechanism, he is an originator, the master genius, who first contrives machinery to do that which for thousands of years the hand of man alone was able to perform. And it is for the protection of such meritorious inventions most particularly that the aid of Courts is invoked.

If a narrow construction, which it is possible to give to any patent is to prevail in cases like the present, or if mistakes made by a patentee in using language not quite as artistic as it is possible to make language should be brought against him as a measure of punishment, so to say, there would seem to be but little use in reporting new inventions to the patent office.

The principal charge made against complainant's patent is that of inartistic language. Terry himself admits that Wicke might have claimed the combination of the carriage with the plunger and guide, (answer 52, page 61) but he only claimed the combination of the plunger and guide in the second claim. Is this an error? Terry who is most anxious to show the defects in complainant's patent, nevertheless admits that he understands it, and if he understands it as every other one of the witnesses who were called understood the patent, where is the defect? Has not the patentee given to the public full measure by describing an important highly meritorious and entirely novel invention in all its aspects so that his enemies must admit that they could make the machine from the description, and is not the public to return to him according to law full measure in form of a patent by which this meritorious and novel invention, which has been so fully described should be protected for a certain number of years?

If the patent law amounts to anything, if the protection to be given to a patent by the Courts, is ever to apply, it seems that this is the case where such protection should be extended. The defendant relies upon his own patent, and claims to have made an invention thirteen years after the complainant's patent was issued. What is the extent of his originality, what has he given? Let his claim speak for him. The Court will find it on page 82 of the record. It is in the following words: "The combination of frame A, treadle D, rock shaft G, head *a* provided with one or more adjustable hammers *n n*, one or more adjustable dies *m m*, and the rest B; all the said parts constructed and combined substantially as set forth." Substitute in said claim change of terms as follows: Gate for head, plungers for hammers, guide or jaw for die, and table for rest, and we have the claim for the Wicke machine, which by inadvertence the Patent Office seems to have overlooked at the time it granted this claim to Ostrum. The only novel feature in the Ostrum machine is the horizontal position of it, which, as has already been shown, is not an advantage, is a mere avoidance of the narrowest possible construction of the claims of complainant's patent. Every one, as this Court has held, has the right to evade a patent, but no one has a right to invade upon the privilege of a patentee.

Burr vs. Duryee, 1 Wallace 531.

The case is submitted to this honorable Court with the request that it reverse the decree of the Court below.

Very Respectfully

ARTHUR v. BRIESEN,

NEW YORK, November 22, 1880. *of Counsel for Appellant*

No. 437

OFFICE SUPREME
FILE
FEB 11
D. W. MIDDLE

UNITED STATES SUPREME COURT.

APPEAL FROM THE,

United States Circuit Court,

FOR THE SOUTHERN DISTRICT OF NEW YORK.

SECOND CIRCUIT.

WILLIAM WICKE,

COMPLAINANT & APPELLANT,

vs.

HENRY P. OSTRUM,

DEFENDANT & APPELEE.

IN EQUITY.

DEFENDANT'S POINTS.

WILLIAM T. BIRDSALL,

Attorney &c. for Defendant

NO. 150 Broadway New York City.

N. A. CALKINS,

OF COUNSEL, 319 BROADWAY NEW YORK CITY.

ALDINE PRINTING HOUSE, NEW YORK 1879.

UNITED STATES SUPREME COURT.

WILLIAM WICKE,
Complainant and Appellant.

vs.

HENRY P. OSTRUM,
Defendant and Respondant.

In Equity.

Statement.

I.– This appeal is taken from the circuit court of the United States, for the southern district of New York (second circuit.)

II.– The cause was tried in the circuit court before his honor, Judge Blatchford, and the court below found as matter of fact that the complainant had not shown any infringement of his patent by the defendant, and dismissed the complainants bill. page

III.– The complainant is the owner of letters patent No. 38,924 origenally granted to George Wicke, June 16. 1863, and is manufacturing machines substantially in accordance with said letters patent, which patent is fully set forth and described, at pages.

IV.– The defendant is the owner of letters patent No, 172,579 originally granted to him January 25. 1876, and is manufacturing a machine substantially in accordance with the machine therein described, which patent is fully set forth and described at pages.

V.– The construction and mode of operation of these two nailing machines are fully described, and illustrated in the exhibits referred to, and also; in the testimony of George Terry, page and William C. Hicks, page which has been taken in this case on the part of the defendant.

VI.– The machines described in these two letters patent, are "machines for nailing boxes" in which any required number of nails may be simultaneously driven, in the manner set forth and described in said letters patent; respectively.

POINTS.

There are three separate issues presented in the case, as follows:

I. Is the matter of invention claimed in the fourth claim of complainant's patent a new invention?

II. Does the complainant's patent show and describe a practical and operative box-nailing machine?

III.– Has the defendant infringed any of the rights secured to the complainant by the letters patent No. 38,924 ?

These questions I will discuss separately, and in their order:

FIRST.

The fourth claim in complainant's patent reads as follows:

> " The arrangement of the circular portion *e. f.* on
> " the cam C. to operate, in combination with the
> " gate B. and treadle *d.* substantially as and for the
> " purpose set forth. "

This is undoubtedly a claim for the cam, with the circular portion *e. f.* as shown in figure 2 of complainant's patent. If we look at the description, page we find that the circular portion *e. f.* is made to form part of a circle described from the centre of shaft D.

The defendant has conclusively shown that this is an old device, and that this cam was used more than two years prior to the complainant's patent.

The witnesses George R. Kelsey and William W. Hyde (pages) testify to a prior knowledge of the cam, as described, with a circular portion *e f* and to having seen the same in use more than two years prior to the complainant's patent. And the witness George

Terry, (page) testifies to having made such cams years before the date of complainant's patent. Defendant's Exhibit No. E (page) shows letters patent No. 7,768 dated November 12. 1850, in which such a cam is shown and described, of which the witness George Terry, (page) says that Exhibit No. E shows or contains a cam with a circular portion *which performs the same functions* as the cam claimed in the fourth claim in complainant's patent, *and is substantially the same element.*

SECOND.

Does the complainant's patent show and describe a practical, and operative, box-nailing machine?

In the construction and operation of the complainant's machine (page) means are shown and described in the patent for imparting motion to the plungers for the purpose of driving the nails.

By this description, and having reference to the drawing, we learn that when the cam has been turned as and to the point indicated, that the cam may be turned still further in the same direction without imparting any further motion to the gate " B. " But there is no means shown for bringing the cam back to its normal position, where it may be ready again to depress the gate " B, " and thus drive another nail. pages

In complainant's model, Exhibit No. 5, a spiral spring is attached to the cam shaft for the purpose of bringing the cam back to its first position.

The complainant has attempted to show that the cam could be brought back by means of the springs on the plungers; but it is very apparent that if the cam is turned in the direction and to the point where it may be turned more or less without imparting any further motion to the gate "B," that then there would be no leverage by which the springs on the plungers could possibly operate to bring it back. See testimony of Geo. Terry. page
Also: of Wm. C. Hicks. page

Mr. Almond, in his testimony for the complainant, says: That the model, Exhibit No. 5, could not, from the manner in which it is constructed, be operated by means of the treadle to turn the cam so far that the springs on the plungers would not serve to bring the cam back to its normal position. page, This may all be so, and it simply shows that the model does not represent the patent. The model may have been made for the very purpose of this cause, as it is not, and does not purport to be, a copy of the model on file in the Patent Office, and the testimony of the only two witnesses who have examined this model, Messers, Hicks and Almond, both agree that it does not

represent the patent in several particulars, and especially so in that the model shows a spring under the treadle, and also on the cam-shaft, neither of which are shown in the patent. pages

But even in this model, if you detach the spring on the cam-shaft, and the rod connecting the treadle with the arm on the cam-shaft, then turn the cam in the direction and to the point, as described in the patent, it would be impossible for the springs on the plungers to bring back the cam to its normal position; therefore, a machine made exactly in accordance with the drawings and specifications in the patent, would not be a practical nail-driving machine. Something more has to be done to make it a practical and operative machine; the mechanic must make it to work differently than as described in the patent, that is, he must make it so that the cam cannot be turned to its dead point where it will impart no more motion, or else he must devise some means from his own ingenuity for bringing the cam back to its normal position, as is done in this model.

THIRD.

Has the defendant infringed any of the rights secured to the complainant by the letters patent number 38,924 ?

It only requires a casual examination of the machines, to learn that their mode of operation is entirely different. (See models complainant's Exhibits No. 4 & 5) And not only is this the fact but it is equally manifest that the several devices employed in the respective machines are wholly unalike.

There are five claims in the complainant's patent all of which it is claimed are infringed by the defendant, with the exception of the third claim.

I will consider the several claims in the complainant's patent in their order, and in connection therewith, discuss the proposition of infringement of the same, as presented by the proofs in this case.

I.– The first claim in complainant's patent reads as follows: " 1st. The employment of the grooved
" spring-jaws H., substantially as described,
" for the purpose of receiving the nails,
" and to guide them to their proper places."

If we examine the specifications and drawings of the complainant's patent, we learn that the grooved spring-jaws in complainant's machine are adapted to receive a nail and hold it in a virtical position, in which position the nail is driven.

pages:

They are also adapted to open and let the head of the nail pass freely through the groove, after which they are, by means of the spring connecting the two halves of the spring-jaws, enabled to return to their normal position, ready to receive another nail.

The device employed for receiving and holding the nail in the defendant's machine *which the complainant claims infringes the spring-jaws* is merely a die with a groove in its upper surface, as shown in complainant's Exhibit No. 4, which holds the nail in a horizontal position, they are designated by the letters *m m* in defendant's patent.

It will not be claimed that this is the device claimed in the complainant's patent, or that it is a spring-jaw, or a pair of spring-jaws; neither will it be claimed that the dies *m m* in defendant's machine, would even begin to perform the functions of the spring-jaws, or that the dies would operate to receive and hold a nail in a virtical position.

The only attempt on the part of the complainant to show that the dies *m m* infringe upon the rights of the complainant, is upon the supposition that the one-half of the spring-jaw might be made to operate as a substitute for the dies *m m* in the defendant's machine.

Let us for a moment suppose that this was the fact, that one-half of the spring-jaw could be used in a horizontal position in the stead of the dies *m m*, and what would it amount to? Would it prove that the dies *m m* in the defendant's machine were spring-jaws, or would it prove that they were an equivalent of the spring-jaws? Would it prove the dies *m m* capable of holding a nail in a vertical position? or of opening to let the head of the nail freely pass? or of closing again ready to receive another nail? Most certainly not. The most that could be deduced from such hypotheses would be that a part or one-half of the spring-jaw might be made an equivalent of the dies *m m* in the defendant's machine.

But for a moment let us consider the possibility of substituting the one-half of the spring-jaw in the complainant's machine for the dies *m m* in the defendant's machine. These jaws are a pair of jaws, and the one-half is utterly useless in the machine without the other, "*neither could either one alone, under any conditions, or in any position*, perform the functions of the two; they are as much united and necessary to each other as the two blades of a pair of scissors, or the two jaws of a pair of pincers." testimony of Wm. C. Hicks. page: 66. part 1

There is no question but that the peculiar mechanism

of the spring-jaws is essential, and peculiarly adapted to their mode of operation, that is to receive and hold the nail perpendicularly over the point in the board where it is to be driven.

In this connection the complainant has introduced testimony as to a machine of the defendant's as illustrated in complainant's Exhibit No. 3. page

In this machine the dies for receiving and holding the nails are substantially the same as those in Exhibit No. 4, only that they are not adjustable; they are grooves cut in a solid piece of metal, extending the whole length of the machine, and the grooves are V shaped, like those in Exhibit No. 4; they are made at irregular distances apart, so that the nails may be driven at any desired point or distance from each other by simply placing them in such grooves as will mark the desired distance.

pages:

The principle of the dies therefore in the machine illustrated by Exhibit No. 3 are the same as those in Exhibit No. 4, *except as to their adjustability.*

The mode of operation, therefore, of complainant's and defendant's machines in regard to the holding and guiding the nail are entirely different, and there is an equally important difference in the result produced.

The complainant's machine drives the nail straight into the wood; as the nail is being driven, the spring-jaws open to let the head of the nail pass. Each half of the jaw moves away from the nail and leaves the nail to be driven straight into the wood; while in the defendant's machine the nail is droped into the V shaped groove, which holds it in a horizontal position. The V shaped grooves are cut deeper at the end twords the hammers *n n n* than at the other end, as the nails are driven forward, the heads of the nails ane forced upwards in order to pass over the higher point of the grooves at the end twords the boards into which they are driven. And thus the nails enstead of being driven straight into the wood, (as is the case in the complainant's machine) are driven irregularly, and thereby producing the effect which is produced by the carpenter when he slants the nail before he drives it with the hammer. page

The complainant's attempt to make out an infringement lies in the single proposition that the dies *m m* in the defendant's machine are simply one-half of the spring-jaws of complainant's patent placed in a horizontal position; whereas, the fact as clearly shown, is that the dies *m m* are in no manner like the spring-jaws, and do not in the least resemble them in shape, appearance, mode of operation, or the

result produced; the dies have a different shaped groove from the spring-jaws; will not perform the functions of the spring-jaws, neither will the spring-jaws perform the functions of the dies.

The dies *m m* cannot be construed to be the mechanical equivalent of the spring-jaws in any sense nor under any interpretation of that term.

See Testimony of Terry's Heirs

OF THE SECOND CLAIM.

II.—The second claim in complainant's patent reads as follows:

> " The combination with the spring-jaws *H.* of
> " the rising and falling plungers *E.* construct-
> " ed and operating substantially as and for
> " the purpose described. "

This claim is intended for the combination of the spring-jaws *H* with the rising and falling plungers *E* but what effect can be produced from this combination, or how it will operate to produce any effect it is not so clear to determine. The rising and falling plunger *E* is not a *self acting element*, or perpetual motion, and therefore without the employment of other elements, they would not operate in any manner and do not therefore form a patentable combination.

See testimony of George Terry: page

Although this claim is not sufficiently broad to make a legitimate and patentable combination, yet for the purpose of considering the question of infringement we will assume that the claim covered all the elements necessary to make up an operative and patentable combination.

In order to make out an infringement of a combination it must be shown that the combination patented exists in the machine which it is claimed infringes.

The defendant's machine contains no spring-jaws nor equivalent for them, neither has it a rising and falling plunger with a disk-shaped collar "*i*," or its equivalent, neither has it a cam "*C*," on the end of a shaft "*D*," nor any equivalent of it, and the absence of any one of these elements destroys the combination.

It is true the defendant has employed means for driving the nail, and it was necessary that he should do so, this device in defendant's patent is designated as the hammer "*n n n*." They have no enlargement or disk-shaped collar "*i*," without which they would not operate to drive a nail from the spring-jaws, in the manner as is described in complainant's patent, and are therefore, in no manner a substitute for, or equivalent of them, and it is equally true, that the plunger with its enlargement could

not be made to operate in the defendant's machine.

But it is admitted by the complainant at page X Q. 24 complainant's proofs, that the defendant does not infringe the third claim of complainant's patent.

The third claim is as follows: " Arranging the " plunger *E.* with a disk-shaped collar *i.*, or " its equivalent, to operate in combination with " the spring jaws *H.*, substantially as and for " the purpose specified. "

This claim is identical with the second claim, only in that it specially claims the disk-shaped collar " *i.* " For instance, if the second claim of complainant's patent were left out, there would be nothing lost from the patent, and there would be nothing less claimed than as it now stands.

The second and third claims are for and cover the same combination, and if there is no infringement of the third claim, there can certainly be none of the second.

Whether the hammers employed in the defendant's machine might, or might not with propriety be termed " plungers, " is wholly immaterial in this case, for the only claim made by the complainant for the plungers, (Excepting that contained in the third claim) is in the combination specified in the second claim. And under complainant's admission

that there is no infringement of the third claim puts at rest all question of infringement of the plungers.

OF THE FOURTH CLAIM.

III.– The fourth claim of complainant's patent reads as follows:

> " The arrangement of the circular portion *e f*
> " on the cam C., to operate in combination
> " with the gate B and treadle *d*., substantially as and for the purpose set forth. "

In this claim we also find a claim for a combination of the cam C. with the gate B. and treadle *d*. Here we meet with the same difficulty which we found in the second claim. In order to make this a combination, that can be made to operate for any purpose whatever, we must include the shaft D. provided with an arm *b*. and rod *c*. without the aid of these additional parts, the pretended combination would not work at all.

There is no cam with a circular portion *e f*. in the defendant's machine. The back and forward motion necessary to move the head *a* which carries

the hammers backwards and forwards in defendant's machine is imparted by a rock-shaft as shown in Exhibit No. 4.

The complainant has endeavored to prove that the defendant's machine has a cam that is illustrated in Exhibit No. 6. Let us not dispute about terms employed to designate different parts, Call it the rock-shaft, or a cam, or whatever you please, yet it is clearly not the cam which the complainant claims with the circular portion *e f* etc.

If therefore, the fourth claim in the complainant's patent, should be construed to be a claim for the cam with the circular portion, there is no such cam in the defendant's machine. And if the claim is for a combination, there is no such combination in the defendant's machine, nor is there any equivalent therefor.

pages: 34, 35 & 65

See Testimony of Jos. Tice, page 22

OF THE FIFTH CLAIM.

IV.– The fifth and last claim of complainant's patent, reads as follows:

" The arrangement and combination of one

" or more adjustable carriages F., table J.
" and slide L., constructed and operating in
" the manner and for the purpose substan-
" tially as specified. "

Here again by referring to the description of the invention in the complainant's patent, page we learn that this is a combination that enters exclusively into the adjustment of the machine. I so interpret it, because this is the only result produced by the combination claimed. The carriage F, table J and slide L, will not drive a nail, though they may be and are, necessary elements for holding the boards to be nailed.

This combination is as defective and incomplete as either of the others. To constitute a legitimate and patentable combination, the elements constituting the combination must be required and essential to the successful operation of such combination. Now in the operation of complainant's machine, so far as the operation of the carriage F is concerned, it is immaterial wheather there is any table J or slide L in the machine at all.

The table J supports the boards to be nailed and receives the thrust of the plungers which drives the nail. but the carriage F does not here enter into the operation of the machine in any manner whatever. The carriage F contains the plungers

and to its lower end is attached the spring-jaws, and so far as the operation of the machine is concerned, the spring-jaw and the plunger might be placed in the frame of the machine. The carriage "F" therefore only becomes essential in the adjustment of the machine.

See testimony, pages 53 and 67

In this claim therefore we find, not a legitimate and patentable combination, but merely an aggregation of several results, and each result is the complete product of the combined elements.

But, on the other hand, if we look for this combination in the defendant's machine, we fail to find it. There is no carriage "F" in the defendant's machine, and no equivalent for it. The dies *m m* rest in the bed of the machine. Pages 55 & 70 There is a table in defendant's machine, but it is not adjustable, as is the case with the table in the complainant's machine.

The defendant's machine contains no slide L except the slide illustrated by Exhibit No. 3. But there is no claim for the slide other than in the combination covered by the fifth claim, and there can be no infringement of the slide, if there is none of the combination.

There is no claim in this case that any new result is produced by the complainant's patent, or by any of the combinations therein contained.

FOURTH.

The complainant has introduced testimony page 26 to endeavour to show that the result produced by the complainant's machine, is superior to that produced on the defendant's.

This however is wholly immaterial. And for this reason the defendant has not introduced any contridicting testimony, which he might have done, but deems the testimony of Wm. C. Hicks, page 69 & 70 with the reasons there stated as sufficient on that question.

The issue here is one of infringement, and the question of the quality of the work accomplished by the respective machines, is foreign to the question at issue, excepting, so far as it relates to the operation of the machine, or to the mechanism employed therein.

In this connection the complainant has introduced Exhibit No. 7, to illustrate the results produced by the two machines here in controversey. But this

result however would only be produced (as illustrated on the defendant's machine,) when nails with exceptionally large heads are used, (even if it would then,) for Exhibit No. 7 is not an actual result. The nails were not driven by or on either of the machines, but the witness Almond, drove them by hand. See page 39. X Q 9.

PATENTABLE COMBINATION.

" A new combination, if it produce new and " useful results, is patentable, though all the " constituents of the combination were well " known and in common use before the com- " bination was made. "

" *But the result must be a product of the* " *combination, and not a mere aggrigate of* " *several results, each the complete product of* " *one of the combined elements.* "

" Combined results are not necessarily novel " results, nor are they an old result obtained " in a new and improved manner. "

1873, Hailes *vs.* Van Wormer, 20 Wall., 353.

" It is the instrumentality, contrivance or " machinery through the agency of which " results are effected, and not the results or " purpose are the subject of patent. "

1874, *Re* Merrill, 1 McArthur, 301.

1873, Wooster *vs.* Calhoun, 11 Blatchf., 215.

INFRINGEMENT OF A COMBINATION.

" The use of one of three distinct devices in " a patent for a mere combination of such devi- " ces is not an infringement if there is a sub- " stantial difference between the two machines. "

1870, Rich *vs.* Close, 8 Blatchf., 41.

" Where a patent is taken for a combina- " tion of parts, no one of which is claimed " as new, there is no violation of the patent " *unless the parts are all employed in the* " *same combination.* "

Prouty *vs.* Riggles, 16 Pet., 336.
Eames *vs.* Godfrey, 1 Wall., 78.

Prouty *vs.* Draper, 1 Story, 568.
Brooks *vs.* Jenkins, 3 McLean, 432.
Brooks *vs.* Brinknell, 4 McLean, 70.
McCormick *vs.* Manny, 6 McLean, 539.

The judgement appealed from, dismissing the complainant's bill should be sustained, and the complainant's bill dismissed, and the defendant should have costs of the appeal.

WILLIAM T. BIRDSALL,
Attorney, &c. for defendant.
150 *Broadway, New York City.*

N. A. CALKINS,
Of Counsel,
319 Broadway New York City.